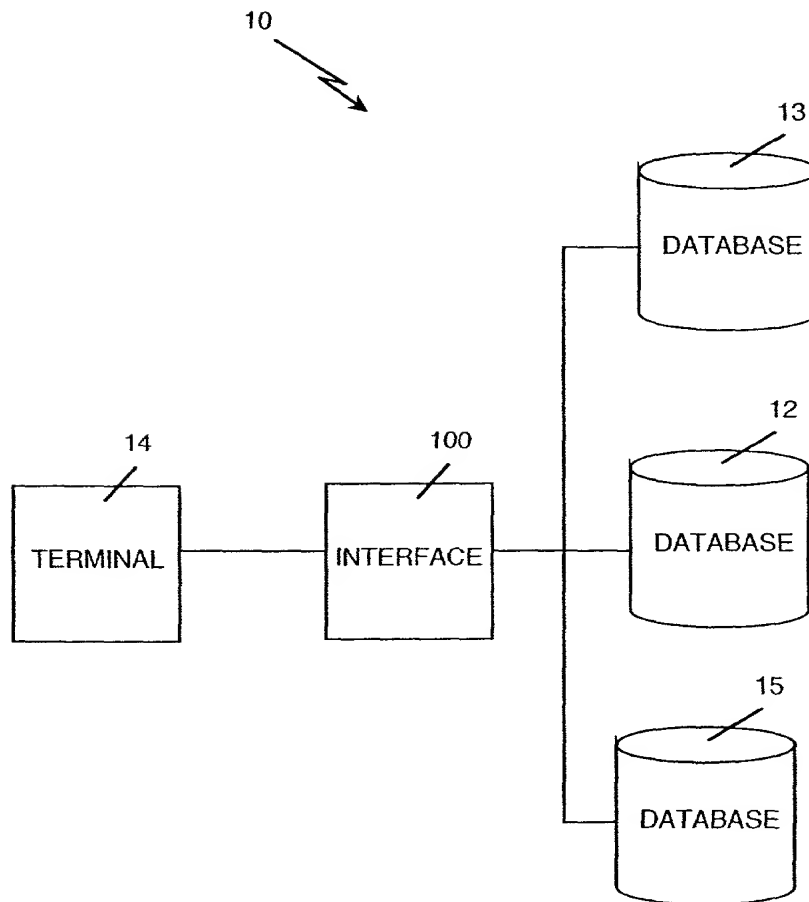


**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION

**Inventor(s):** Joseph L. DeBellis

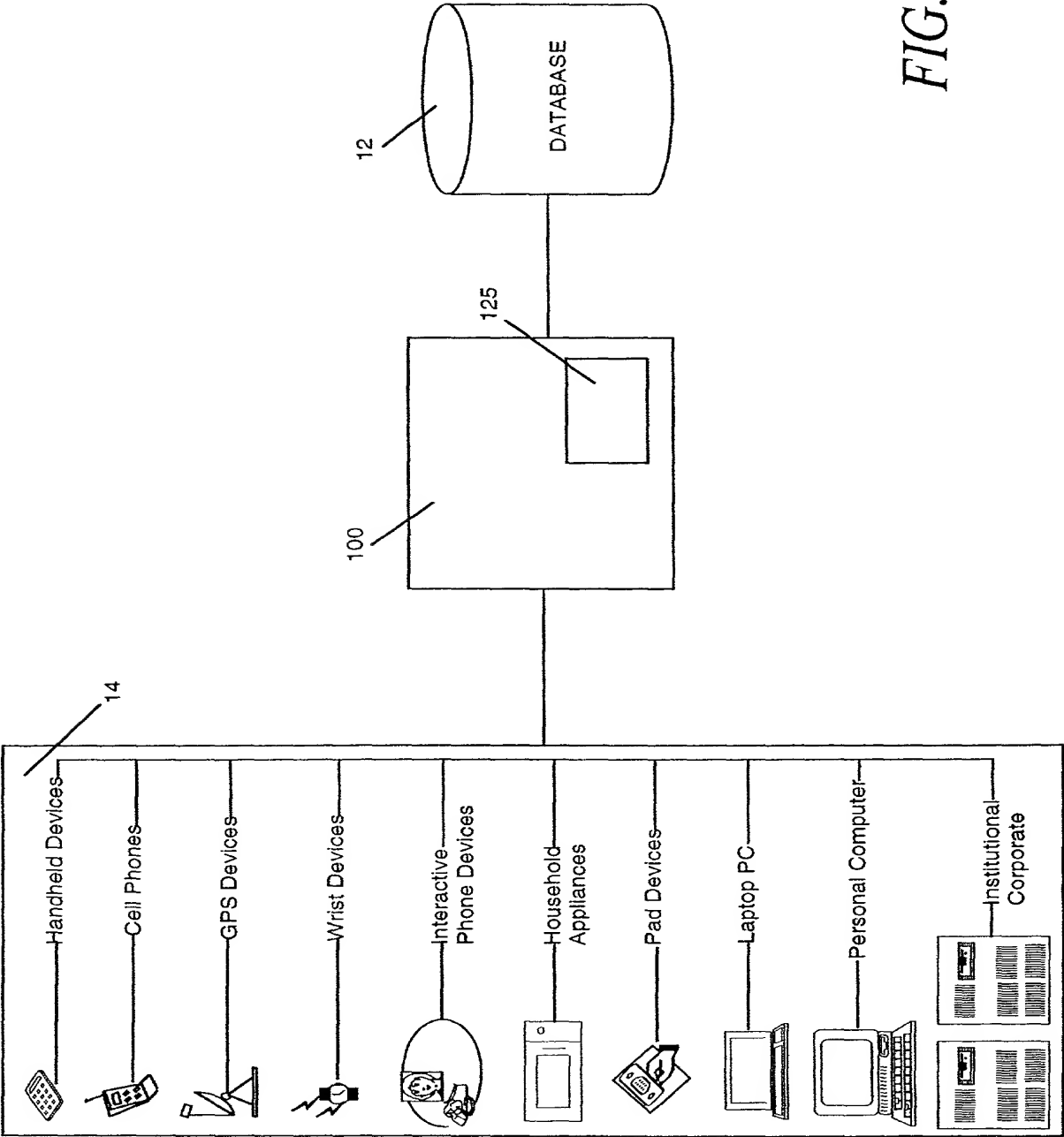
**Contact Name:** Aldo Noto (703) 288-5250

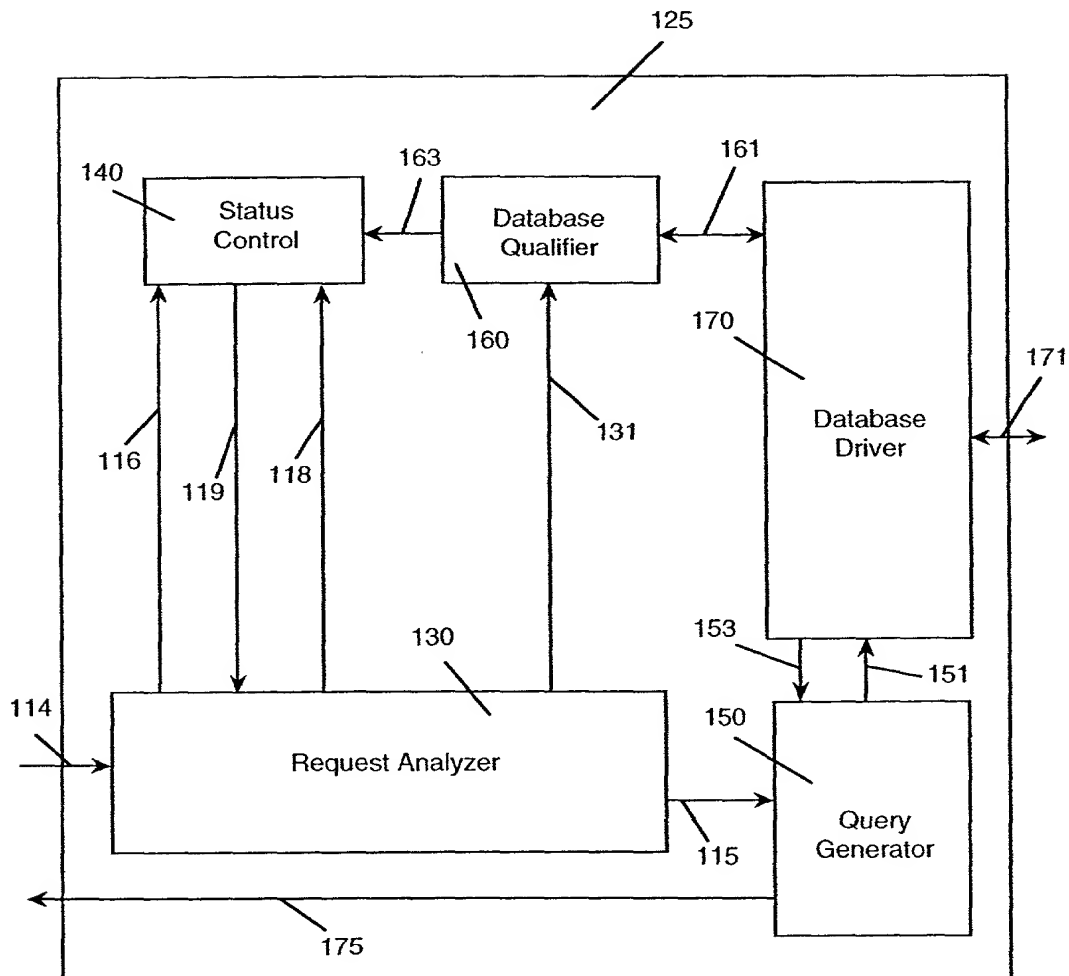
**Attorney Docket No.:** 5607



*FIG. 1*

FIG. 2





*FIG. 3*

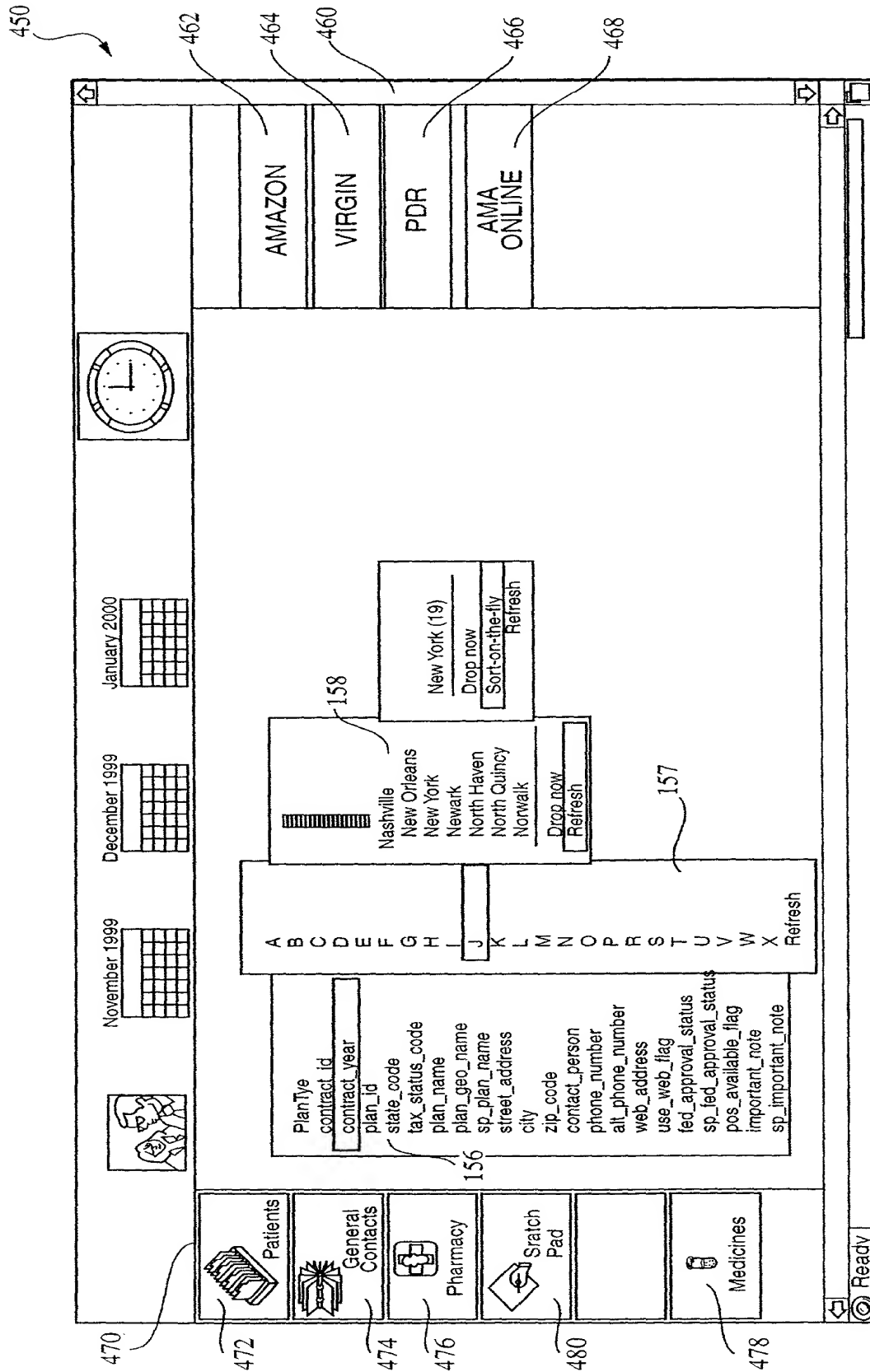
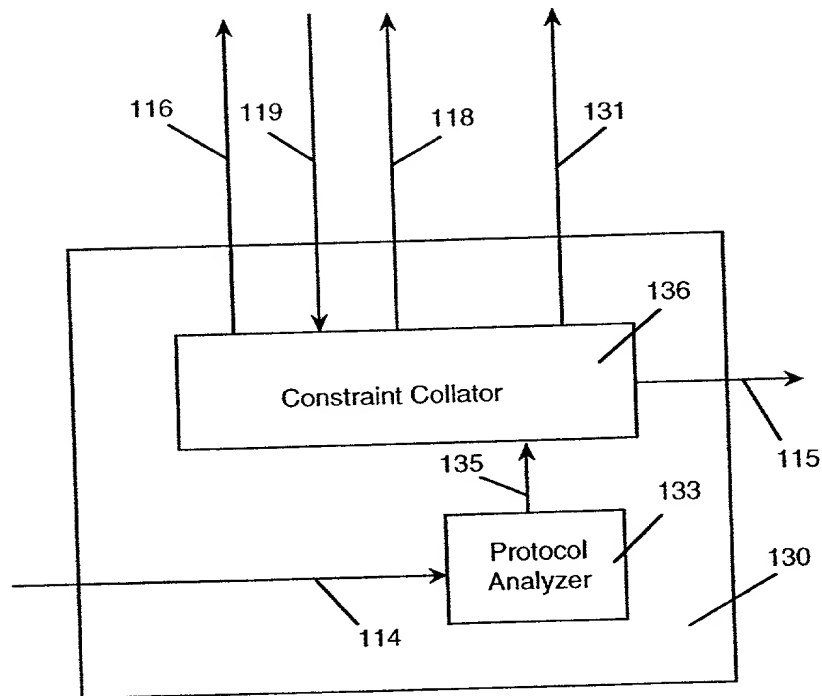
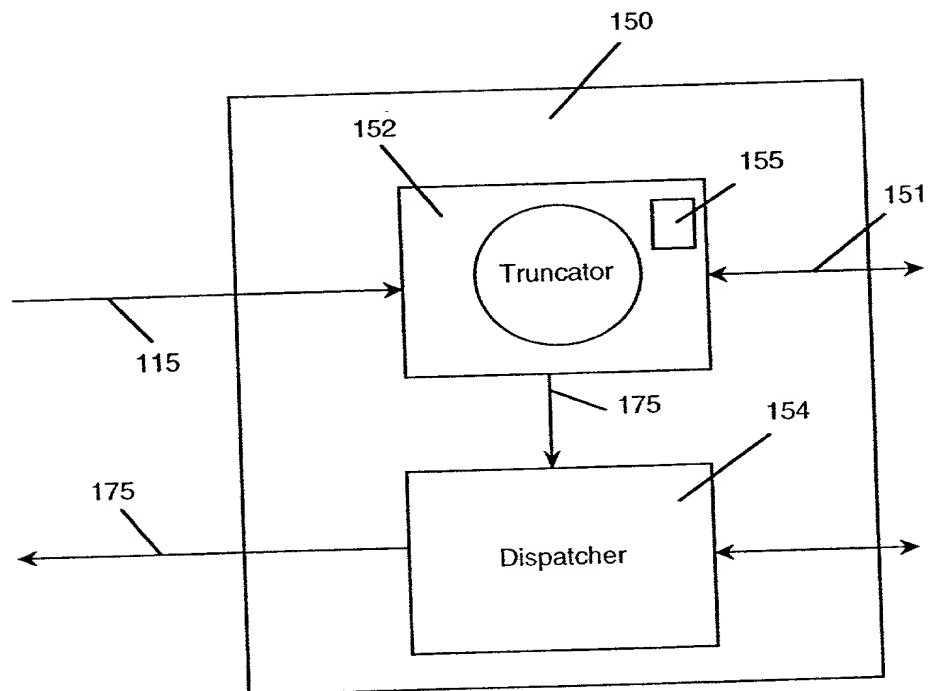


FIG. 4

**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION  
**Inventor(s):** Joseph L. DeBellis  
**Contact Name:** Aldo Noto (703) 288-5250  
**Attorney Docket No.:** 5607



*FIG. 5*



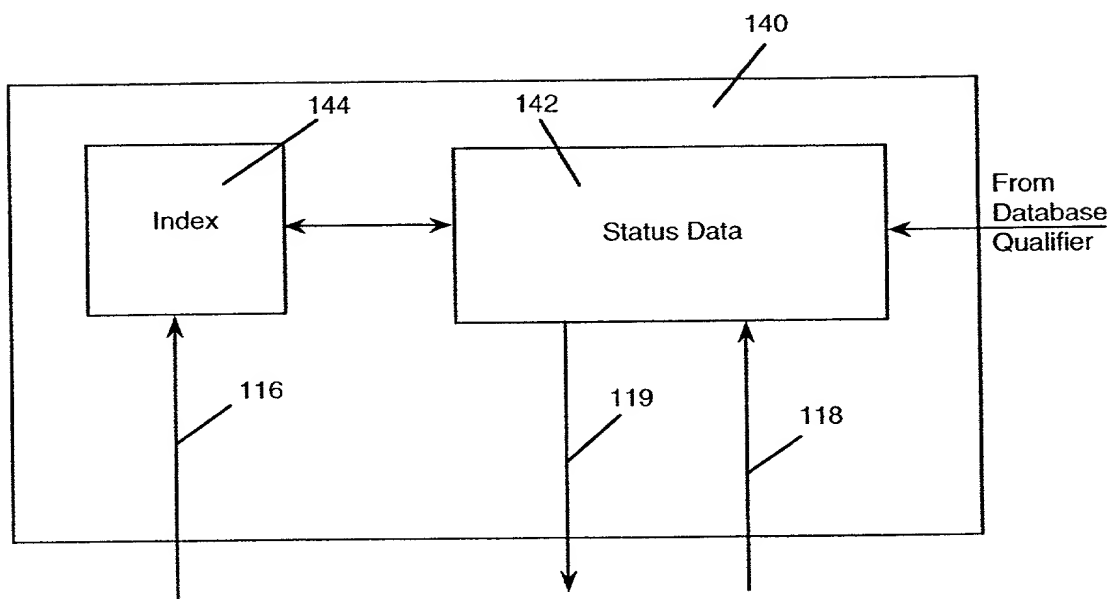
**FIG. 6**

**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION

**Inventor(s):** Joseph L. DeBellis

**Contact Name:** Aldo Noto (703) 288-5250

**Attorney Docket No.:** 5607



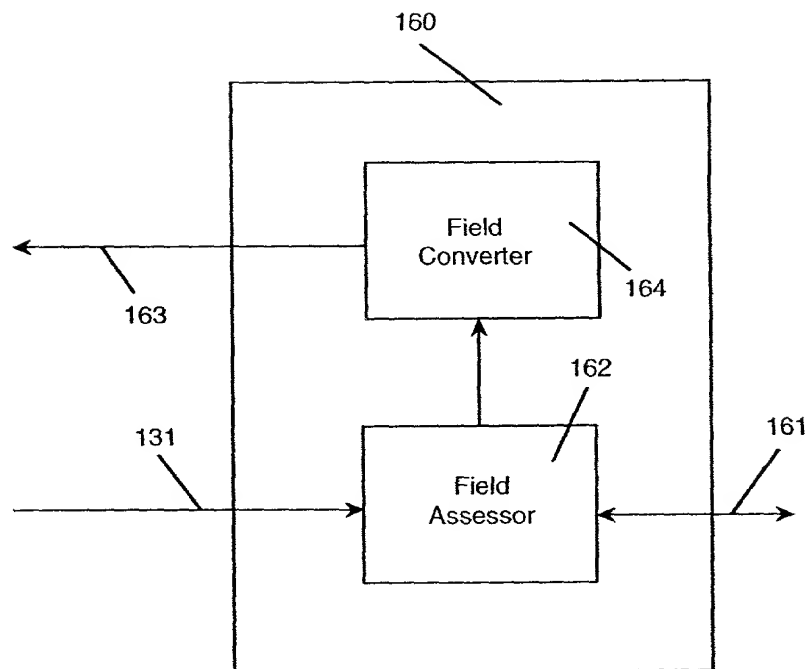
*FIG. 7*

**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION

**Inventor(s):** Joseph L. DeBellis

**Contact Name:** Aldo Noto (703) 288-5250

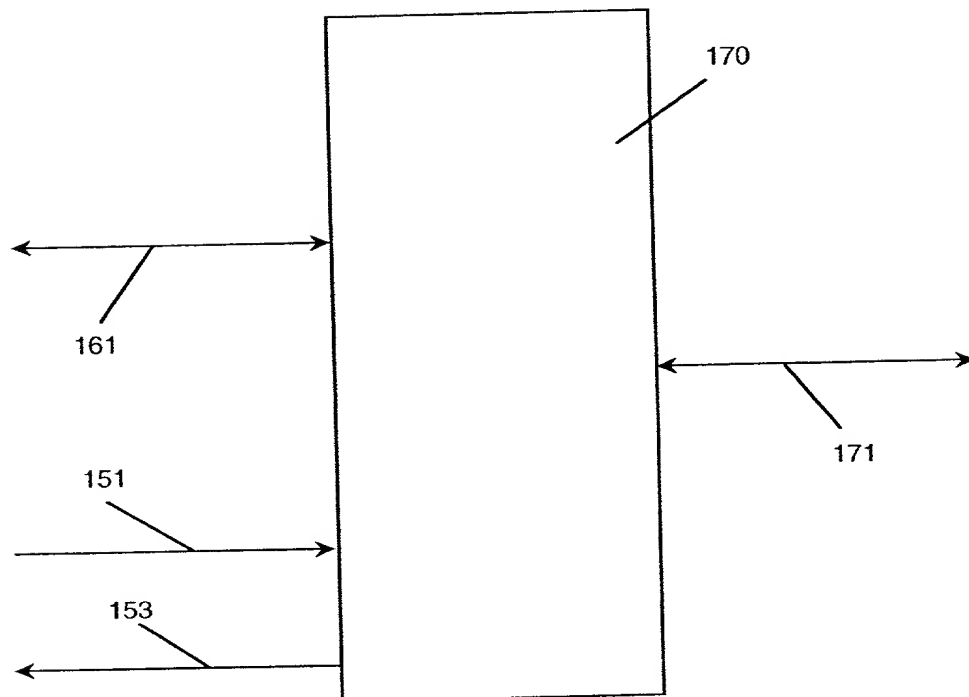
**Attorney Docket No.:** 5607



**FIG. 8**



**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION  
**Inventor(s):** Joseph L. DeBellis  
**Contact Name:** Aldo Noto (703) 288-5250  
**Attorney Docket No.:** 5607



**FIG. 9**

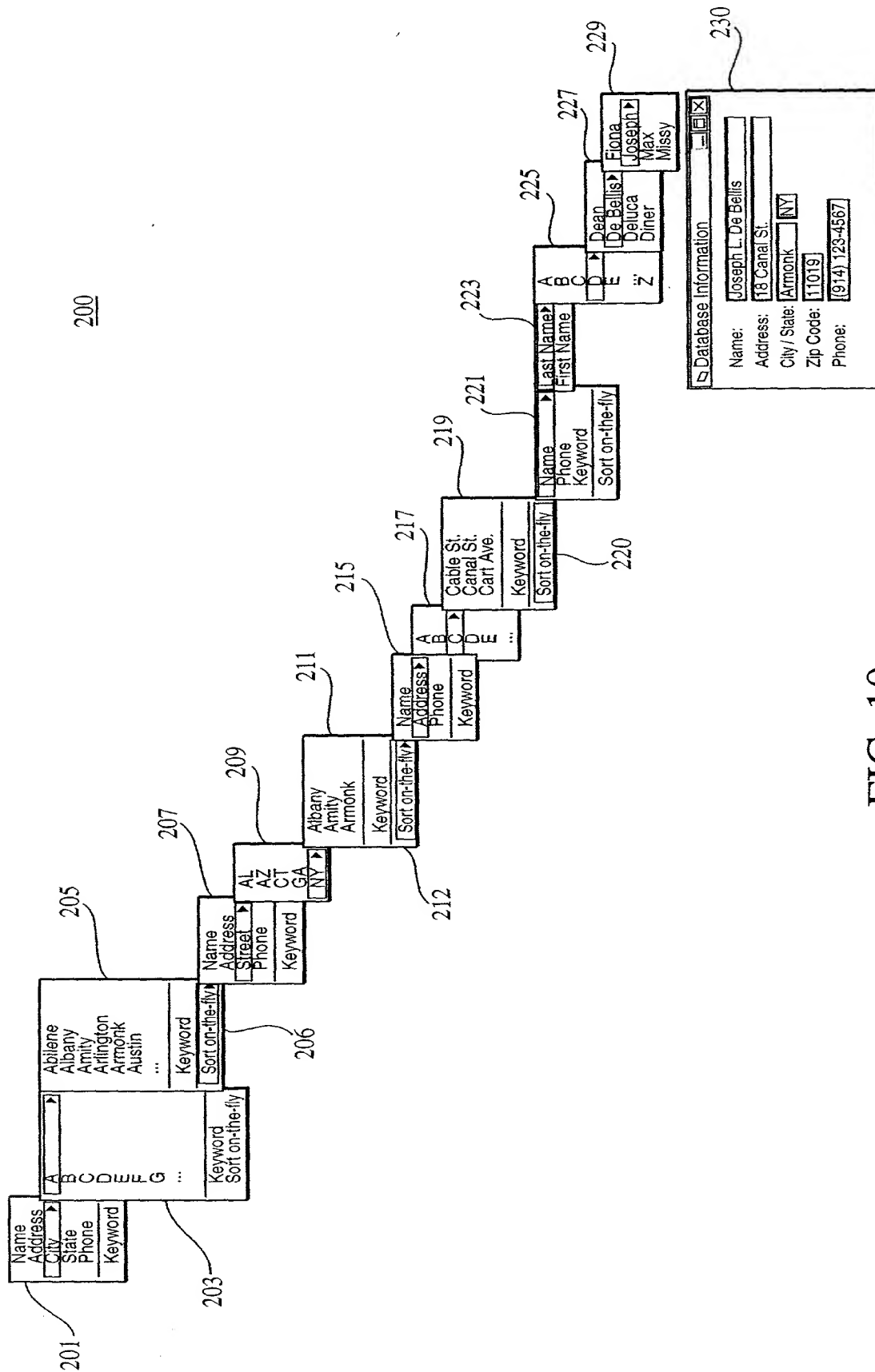
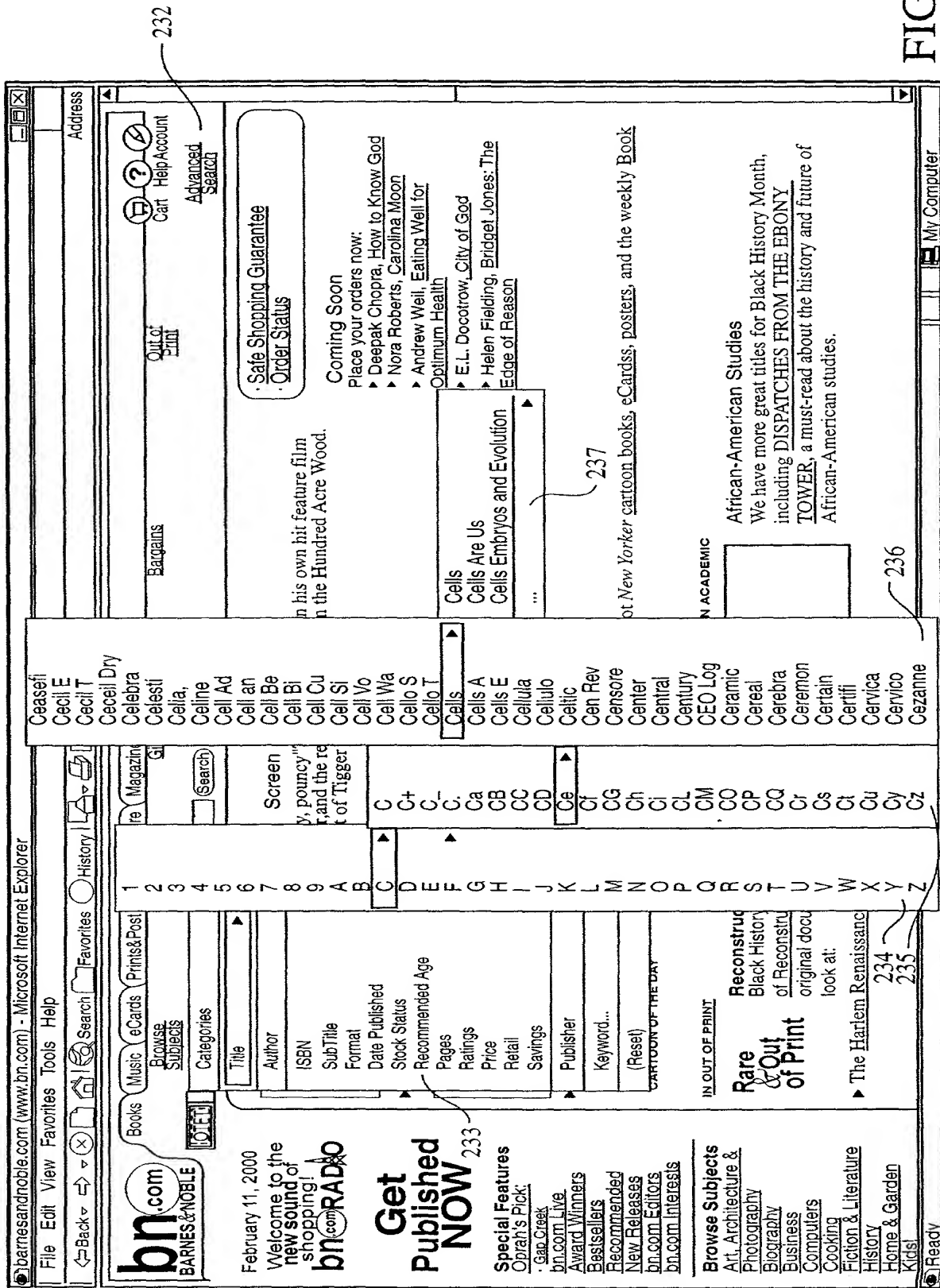


FIG. 10

FIG. 11





Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

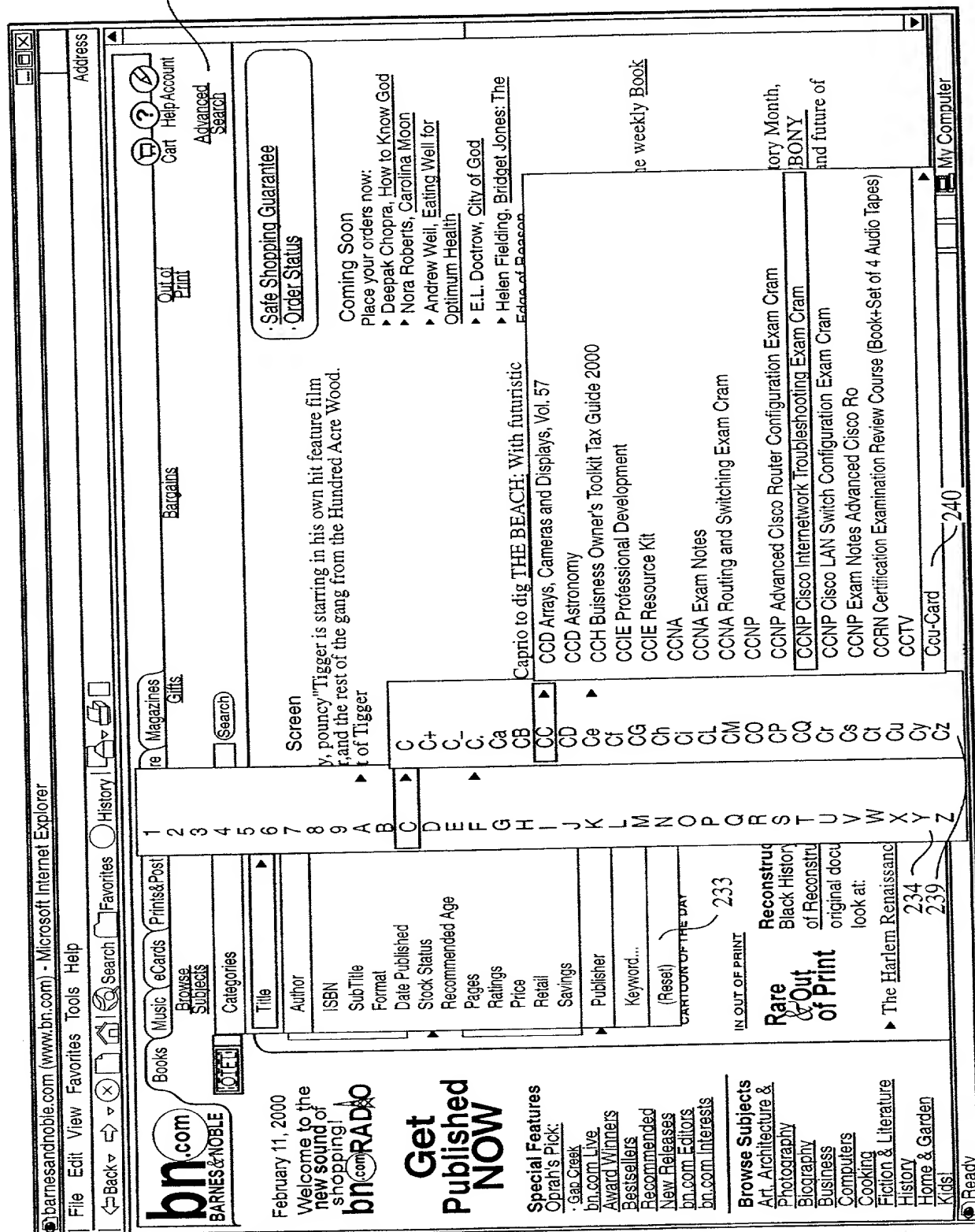
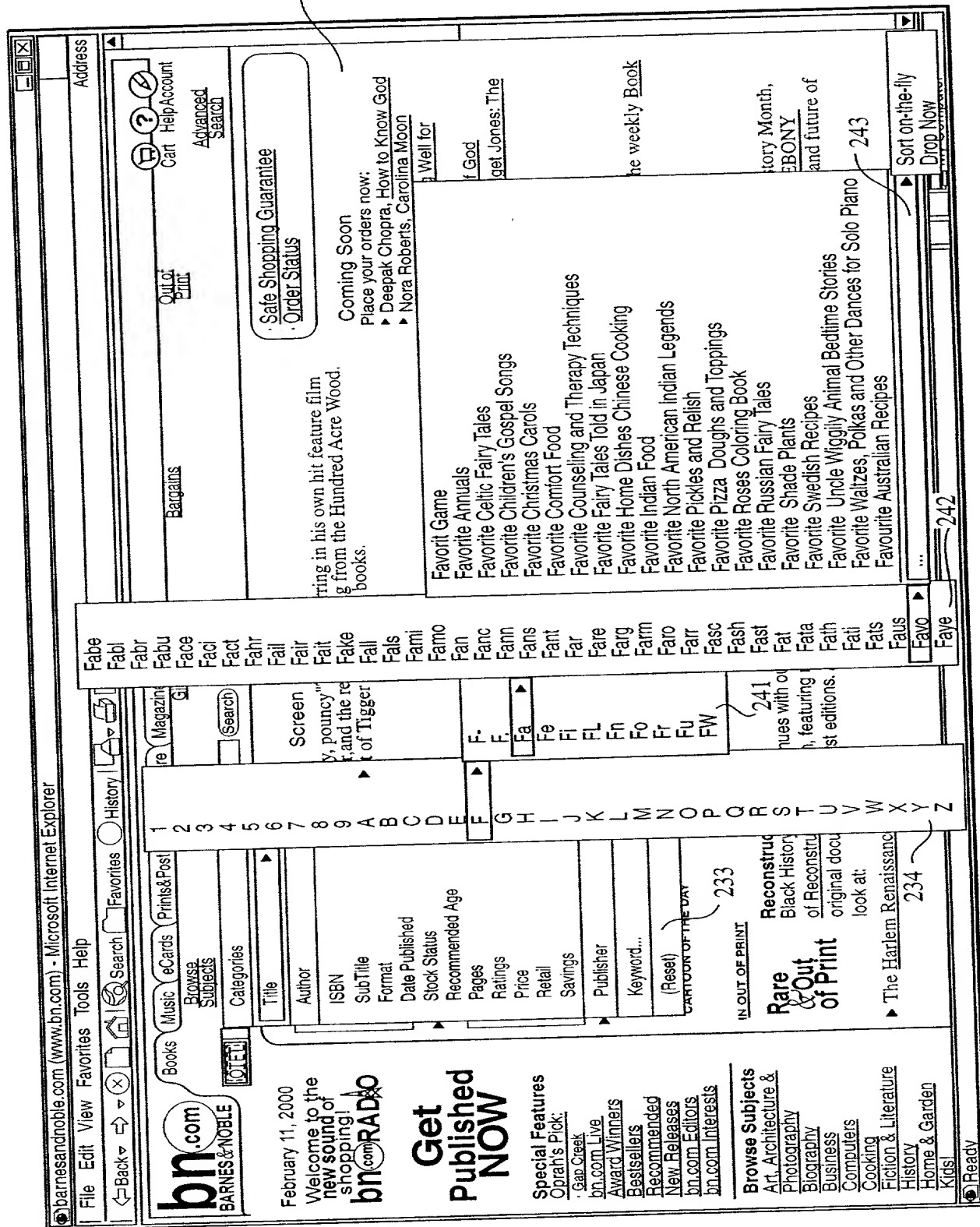
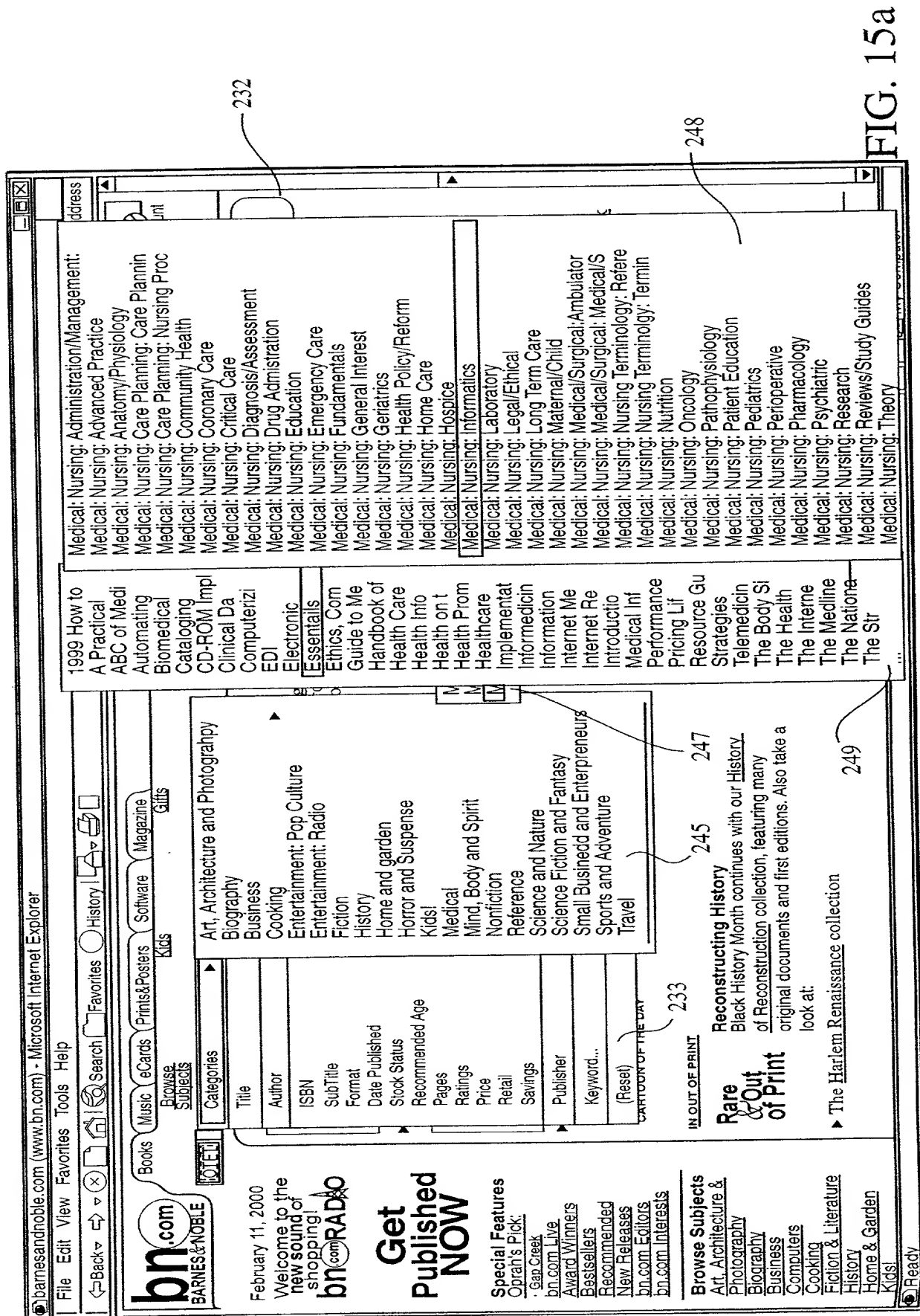


FIG. 13





Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

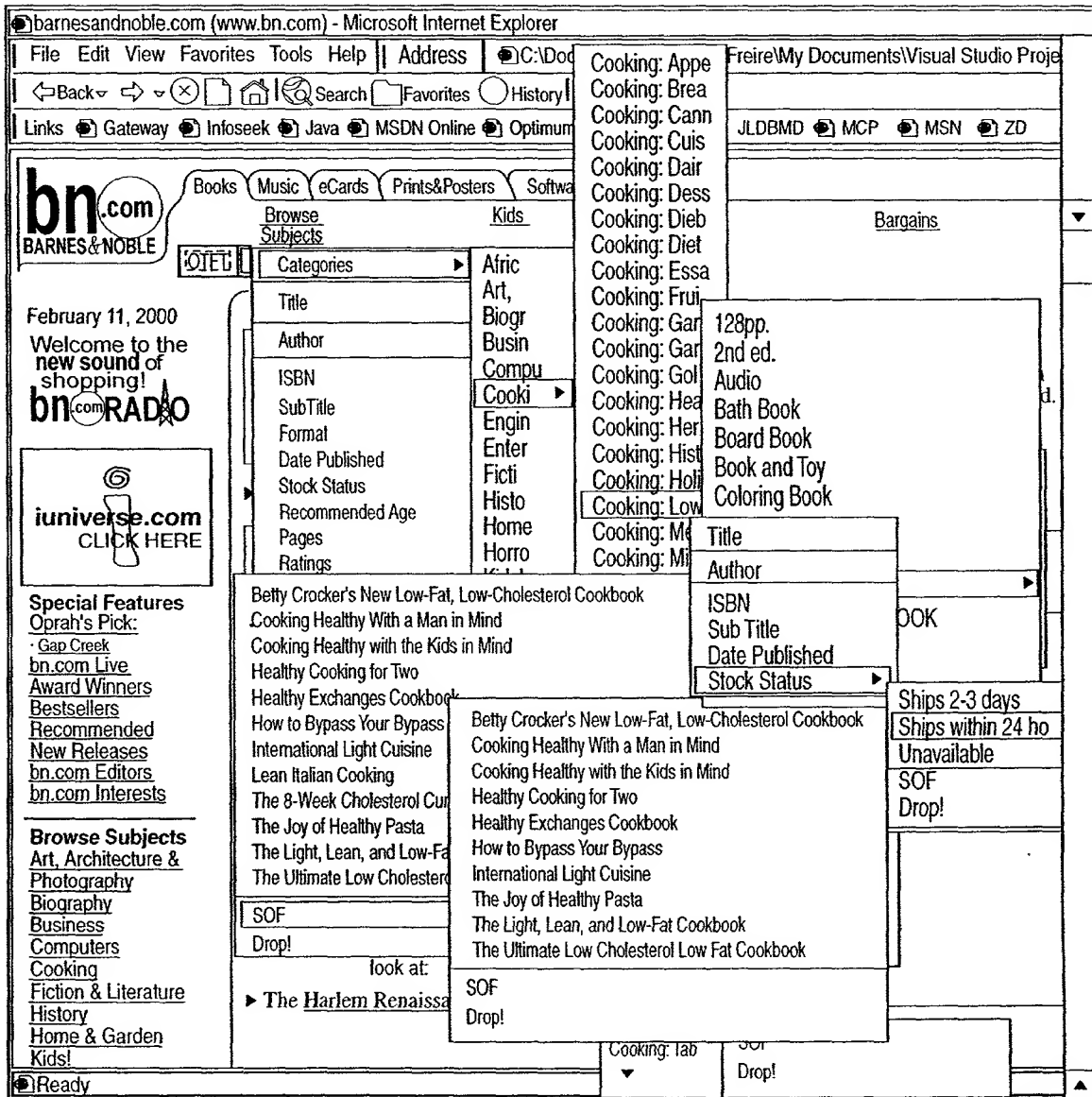


FIG. 15b

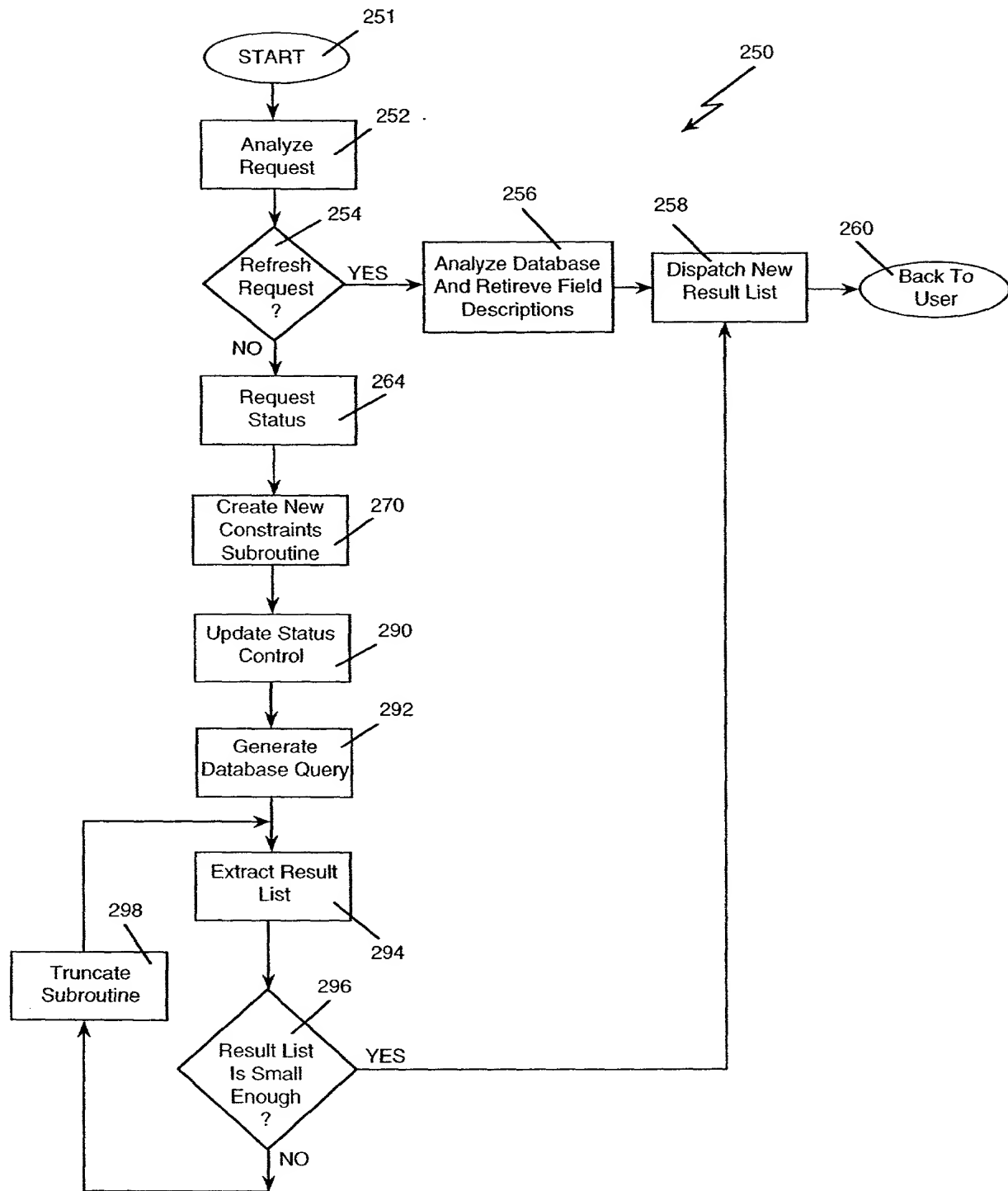


**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION

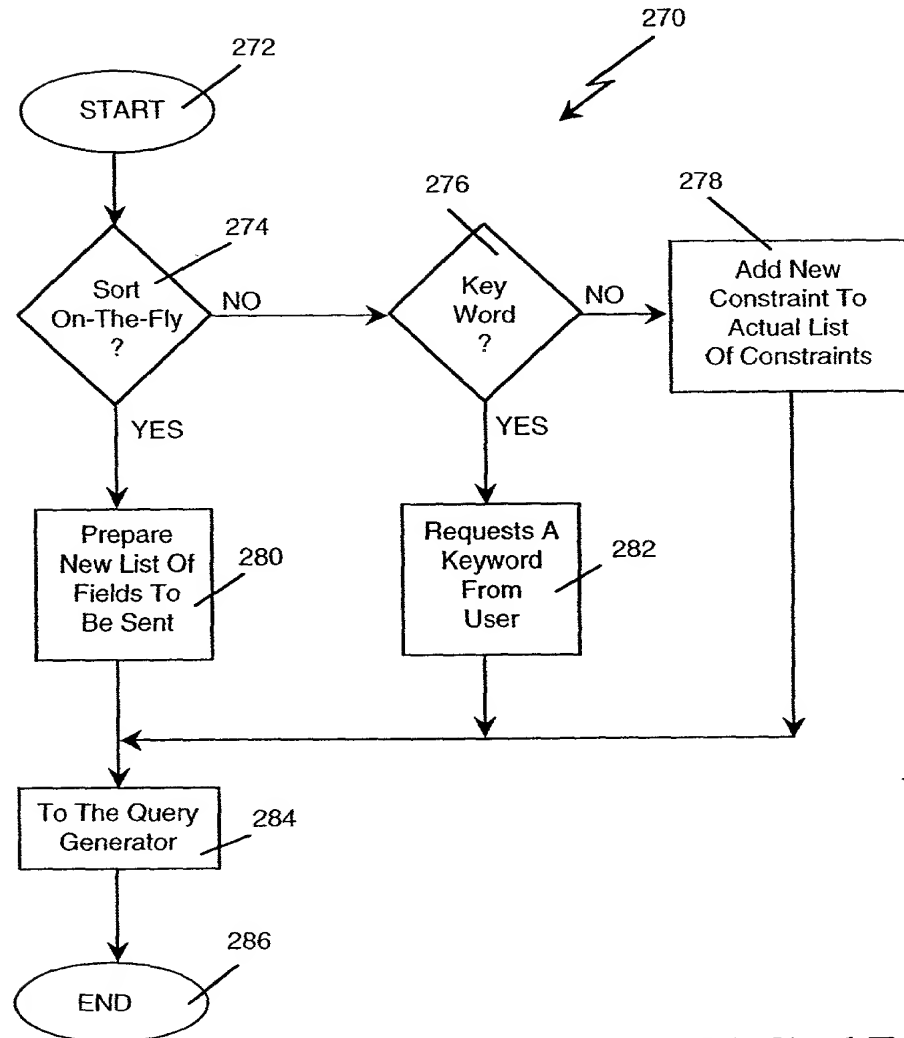
**Inventor(s):** Joseph L. DeBellis

**Contact Name:** Aldo Noto (703) 288-5250

**Attorney Docket No.:** 5607



**FIG. 16**



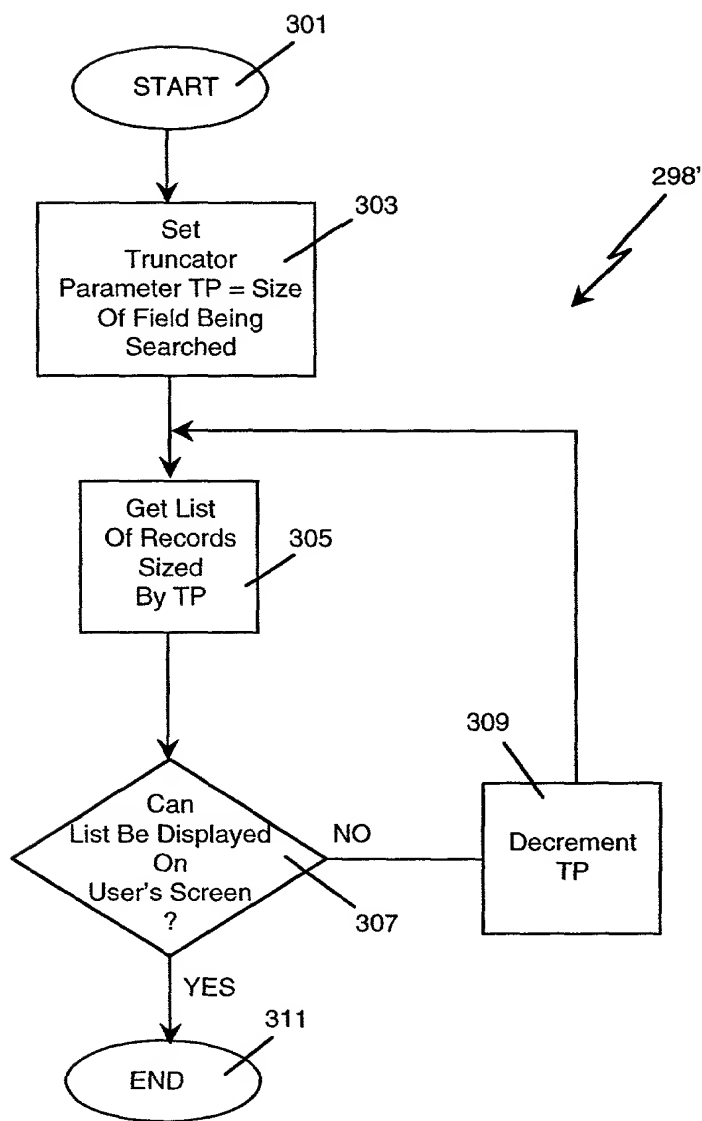
*FIG. 17*

**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION

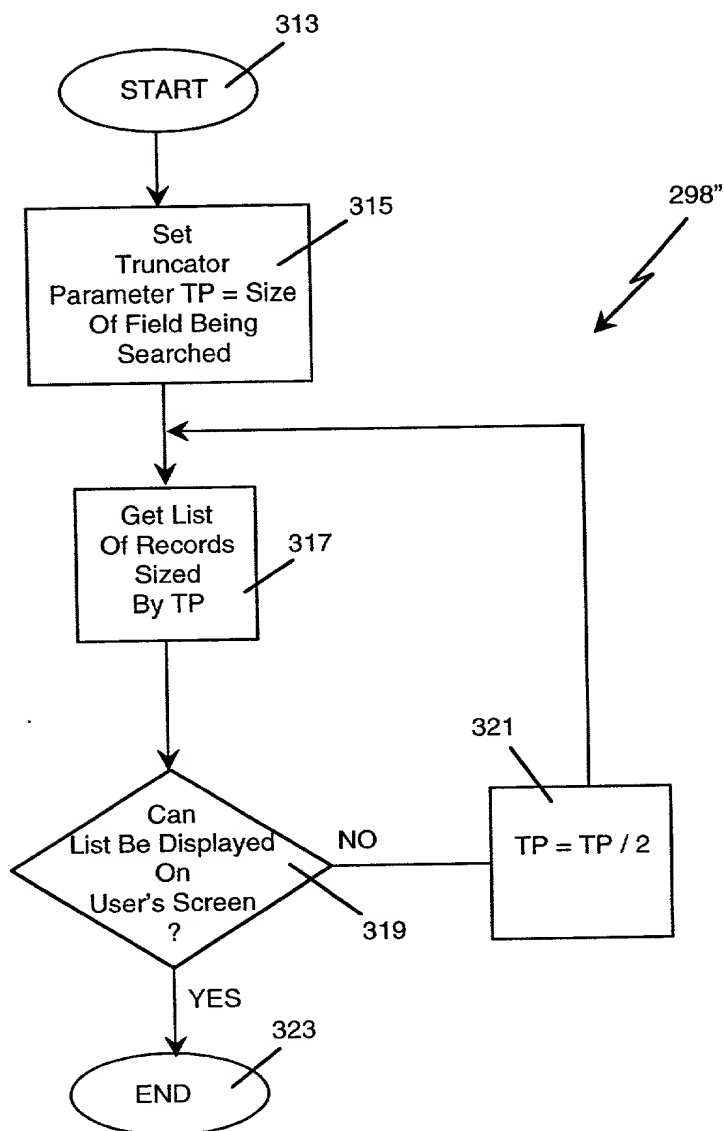
**Inventor(s):** Joseph L. DeBellis

**Contact Name:** Aldo Noto (703) 288-5250

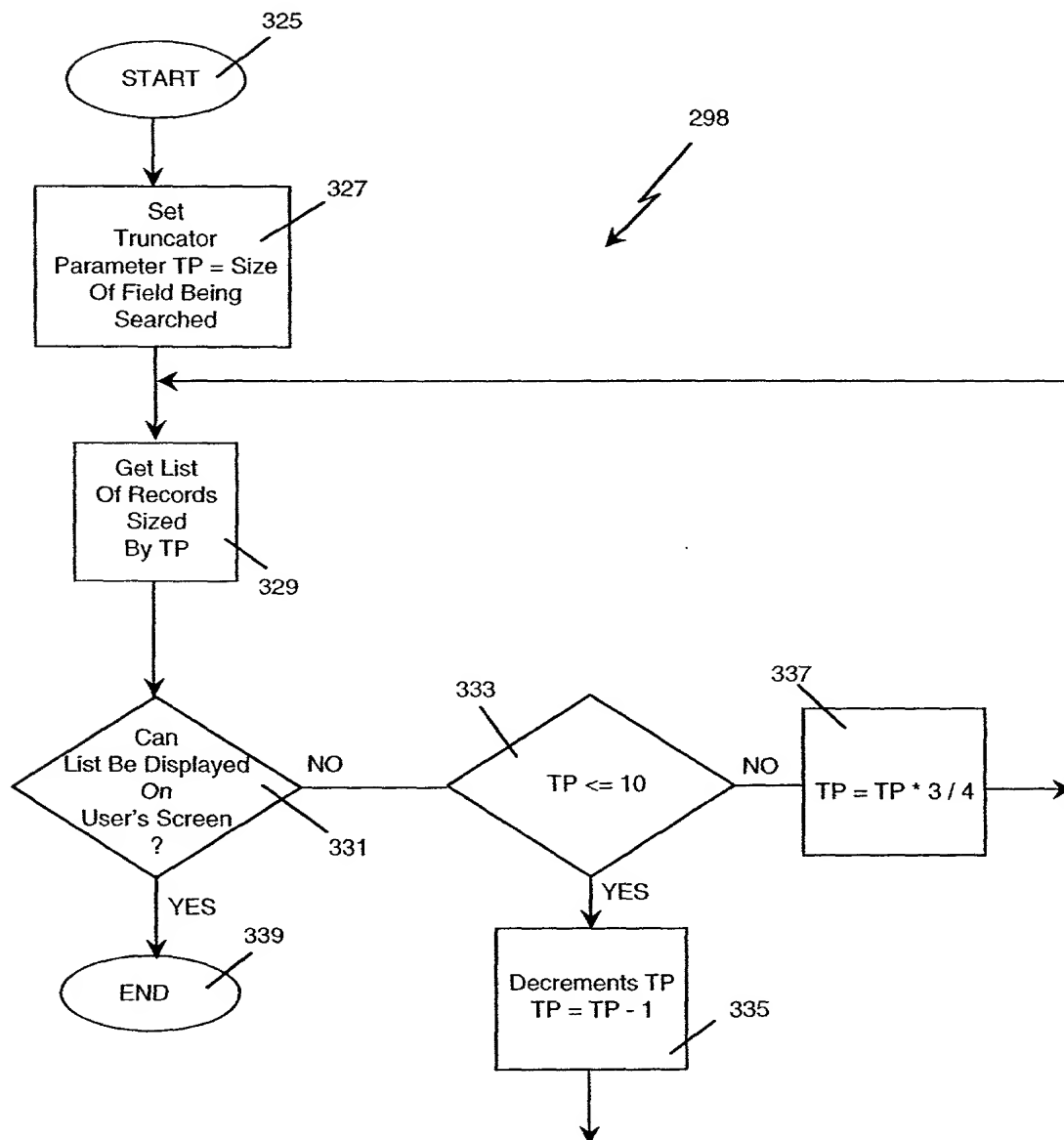
**Attorney Docket No.:** 5607



**FIG. 18**



**FIG. 19**



**FIG. 20**

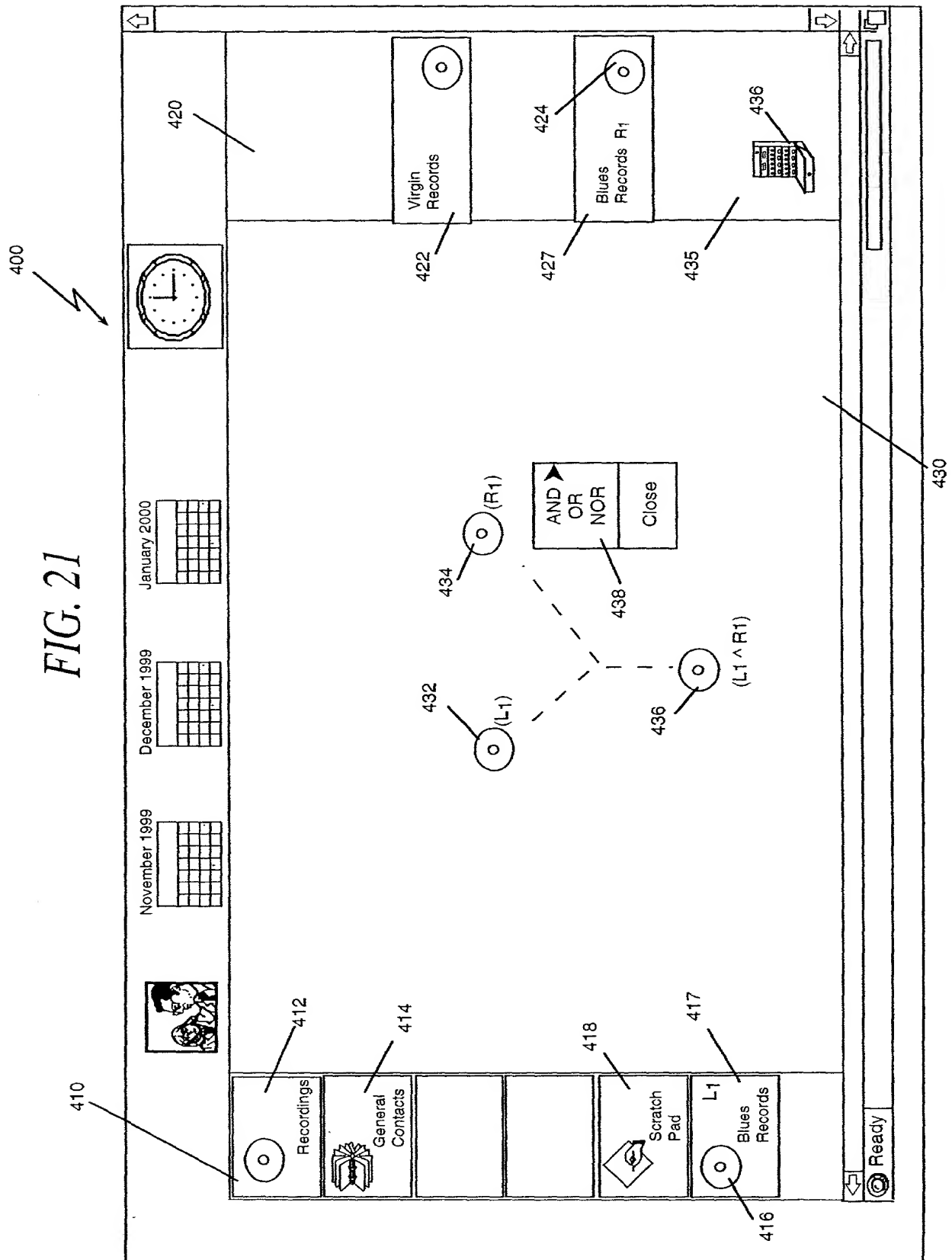


FIG. 22

FIG. 22

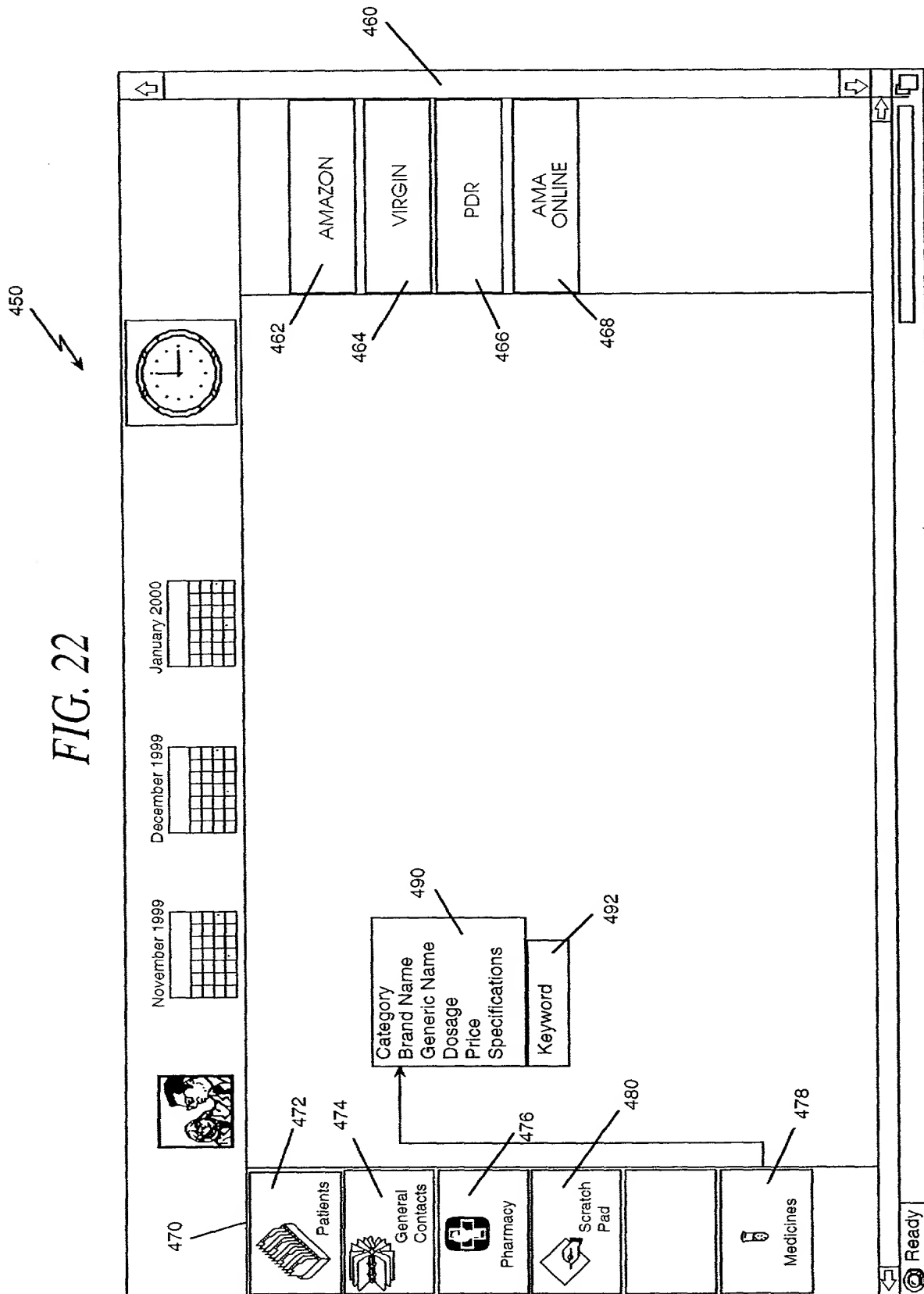


FIG. 23

FIG. 23

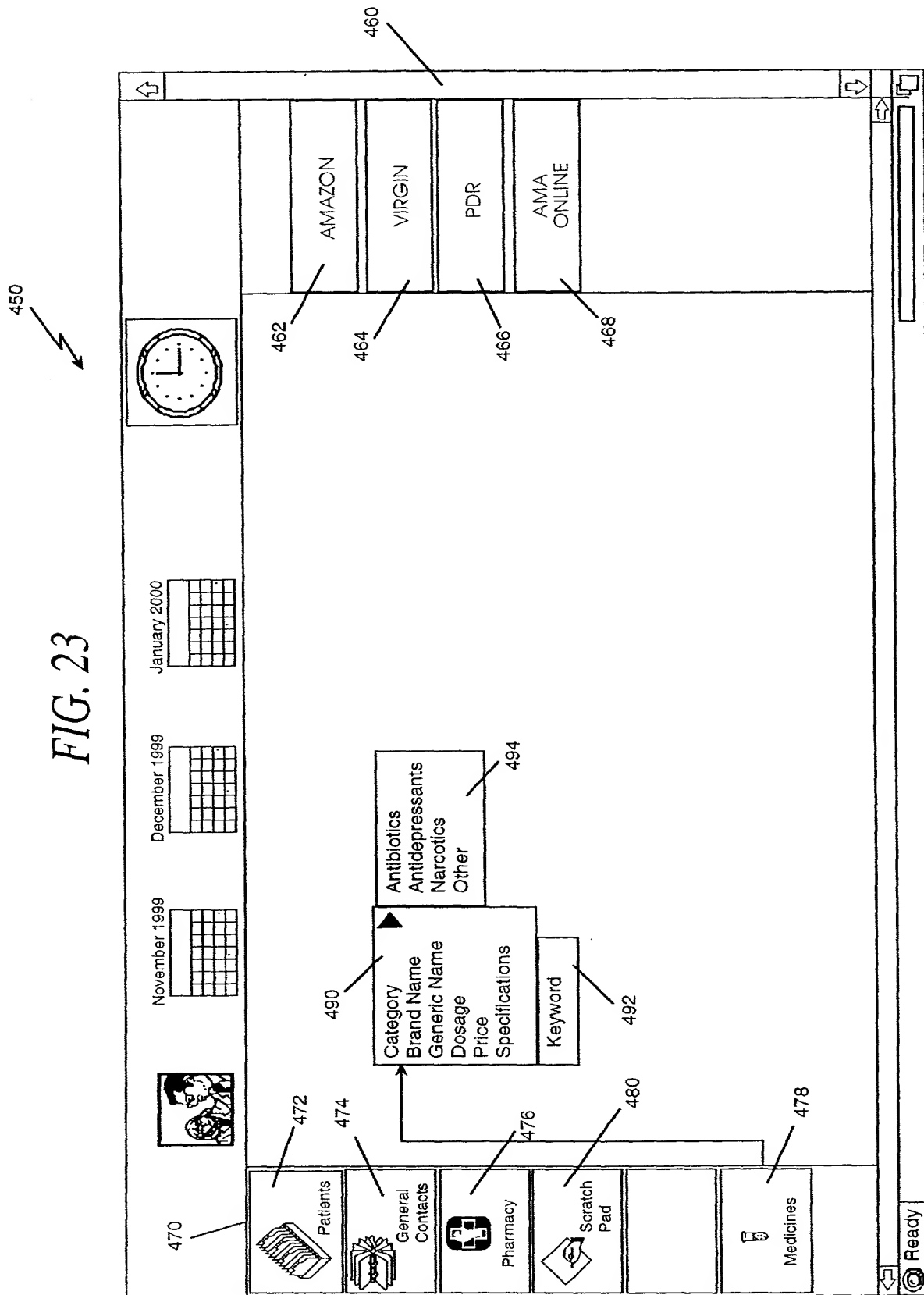
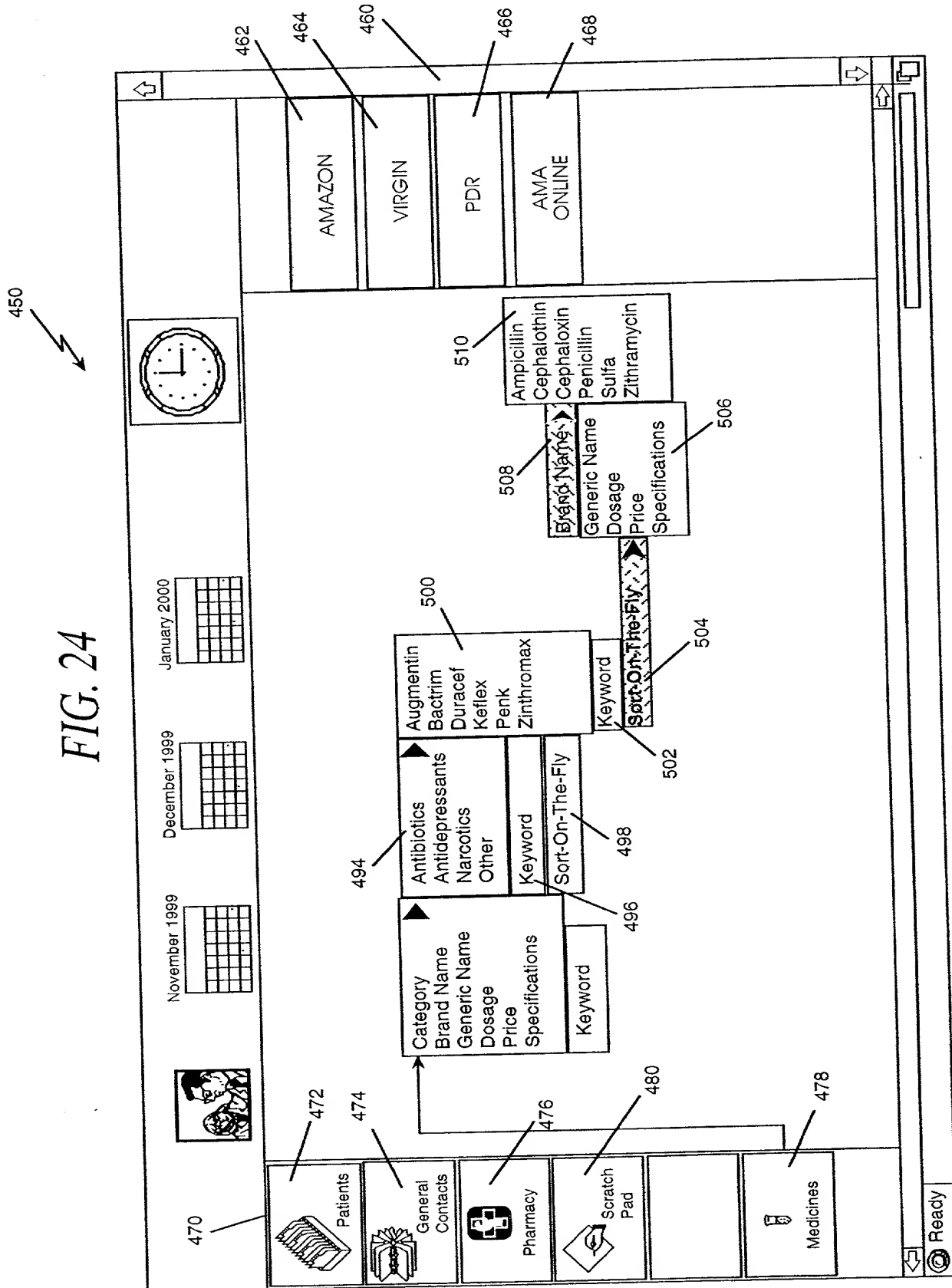
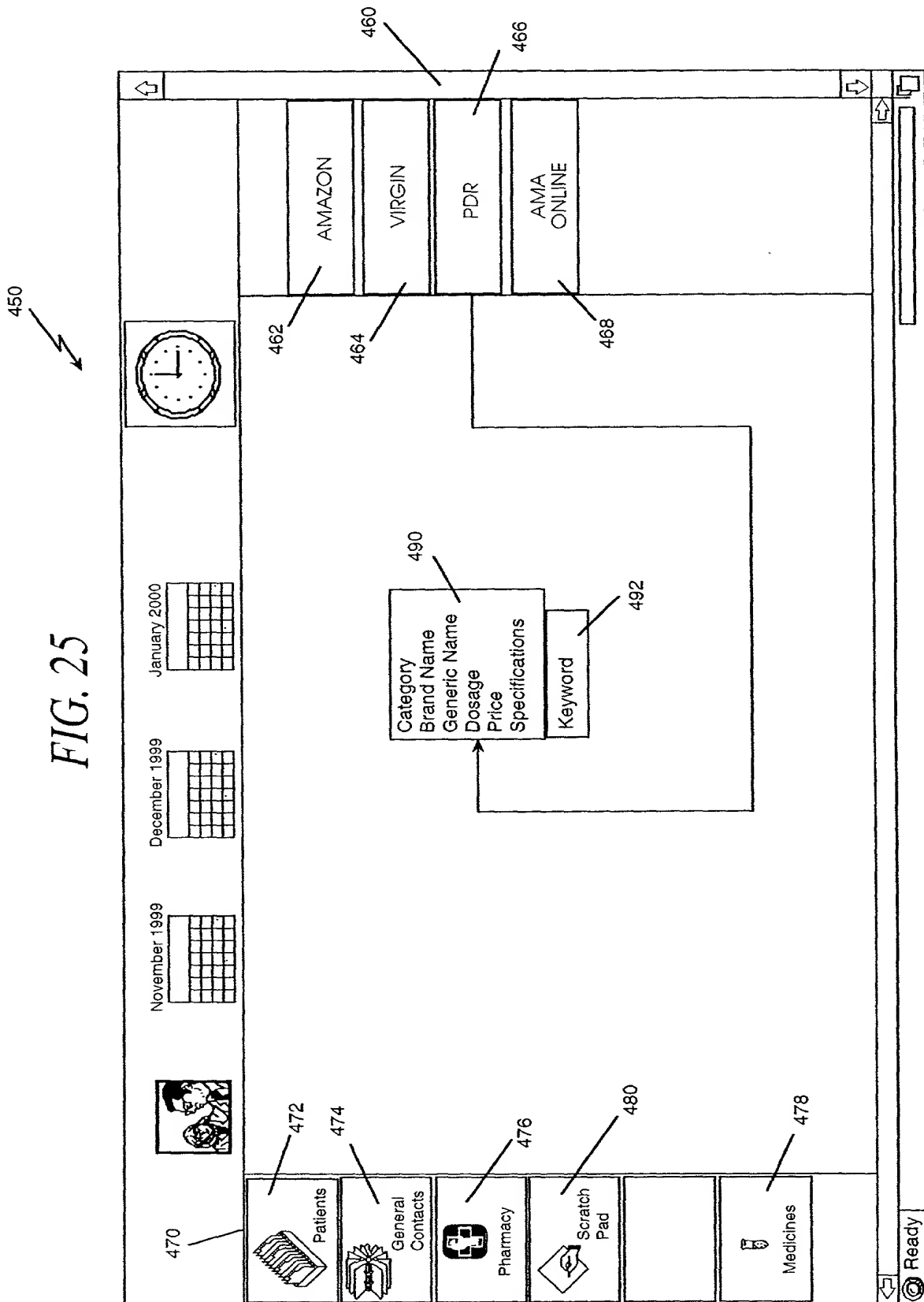




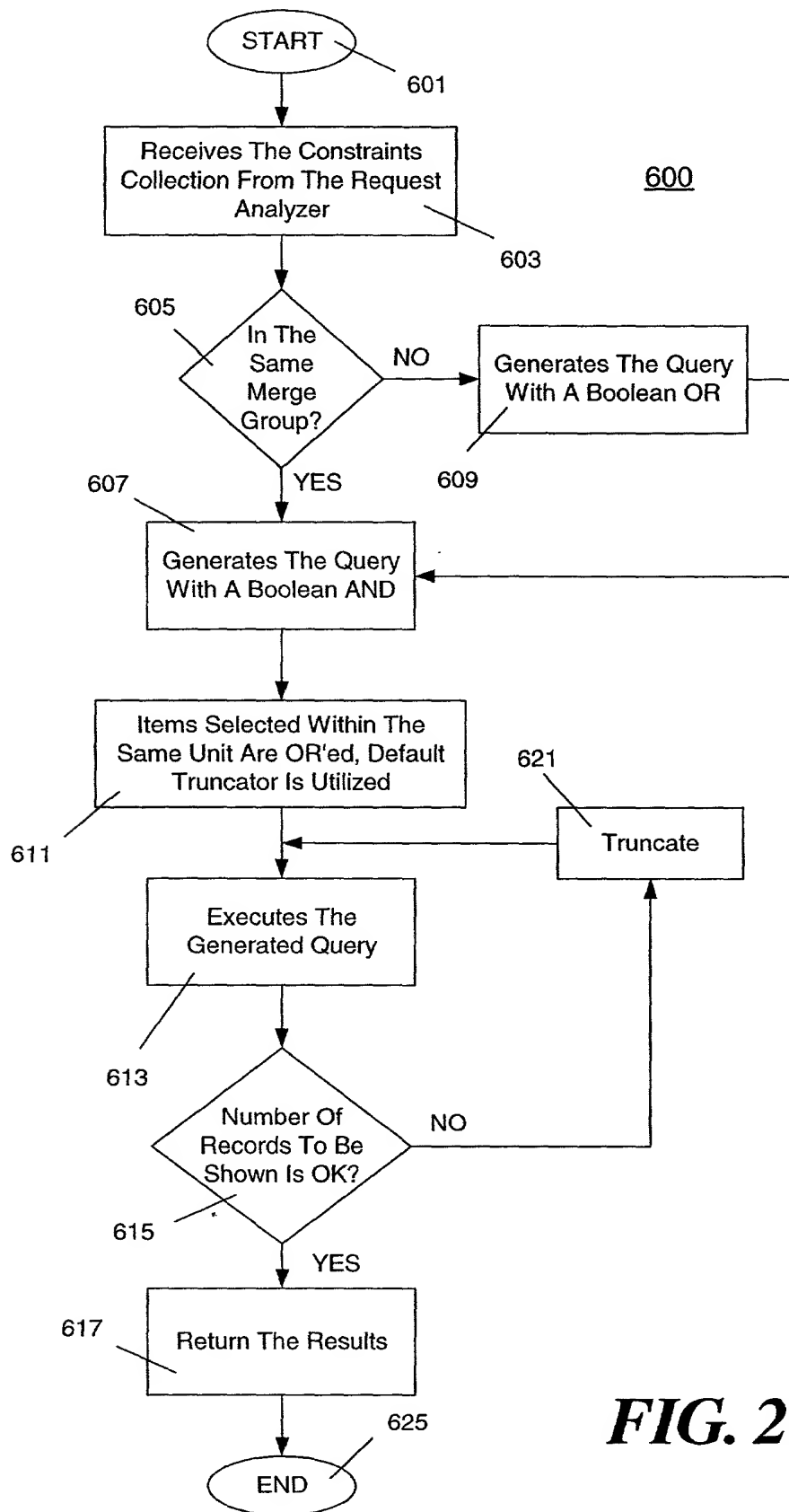
FIG. 24

FIG. 24

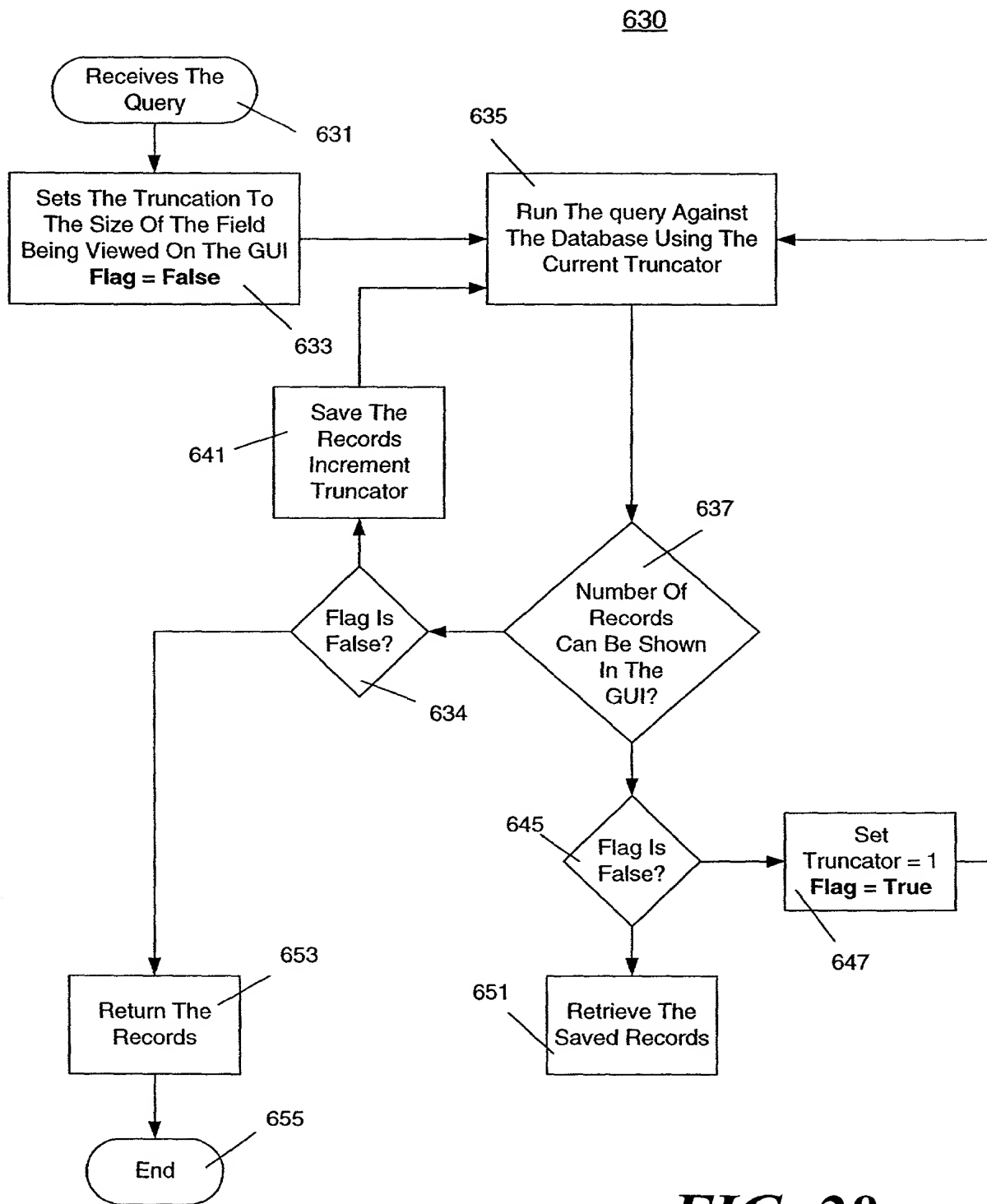








**FIG. 27**



**FIG. 28a**

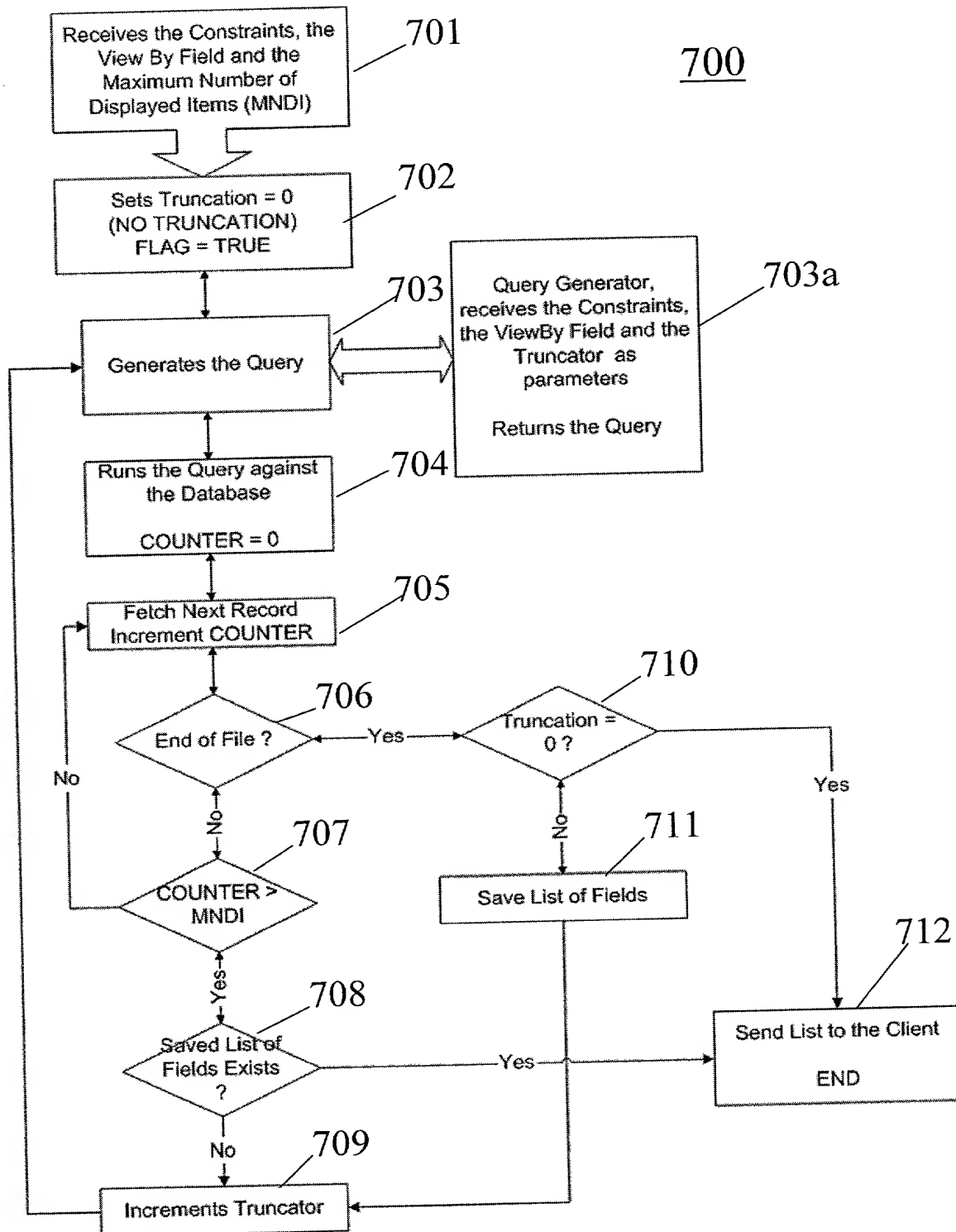


FIG. 28b

**Contact Name:** Aldo Noto (703) 288-5250

**Attorney Docket No.: 5607**

FIG. 29

[illegible]

**Attorney Docket No.: 5607**

FIG. 30

MDI Form 1		S.O.F.	DB Oper.	SOE Setup
<b>Assignee</b>	<input type="checkbox"/> 3 COM Corporation (Santa Clara, CA) <input type="checkbox"/> 3 I Research Exploitation Ltd. (GB) <input type="checkbox"/> 3 S Beton B.V. (Grave, NL) <input type="checkbox"/> 3 Sigma Inc. (Covington, OH) <input type="checkbox"/> 3 U Partners (Casper, WY) <input type="checkbox"/> 3 W Industry Inc. (TW) <input type="checkbox"/> 3-D Dan, Inc. (Walnut Creek, CA) <input type="checkbox"/> 3-Dimensional Pharmaceuticals, Inc. (Exton, PA) <input checked="" type="checkbox"/> 3-M Company (St. Paul, MN) <input type="checkbox"/> 314613 B.C. Ltd. (Vancouver) <input type="checkbox"/> 3244 Corporation (Oak Lawn) <input type="checkbox"/> 373249 B.C. Ltd. (Vancouver) <input type="checkbox"/> 378134 Alberta Ltd. (Calgary) <input type="checkbox"/> 392335 Ontario Ltd. (Putnam) <input type="checkbox"/> 392534 Alberta Ltd. (Edmonton) <input type="checkbox"/> 3Com Corp. (Rolling Meadows) <input type="checkbox"/> 3Com Corp. (Santa Clara, CA) <input type="checkbox"/> 3Com Corporation (Mountain View) <input type="checkbox"/> 3COM Corporation (Rolling Meadows) <input type="checkbox"/> 3com Corporation (Santa Clara) <input type="checkbox"/> 3com Technologies (Cayman Islands) <input type="checkbox"/> 3D International A/S (Oslo, NO) <input type="checkbox"/> 3D Systems, Inc. (Valencia, CA) <input type="checkbox"/> 3DFx Interactive, Incorporated (San Jose, CA) <input type="checkbox"/> 3DGeo Development, Inc. (Mountain View, CA) <input type="checkbox"/> 3Diabs Ltd. (Loughborough, GB) <input type="checkbox"/> 3Diabs, Ltd (Hamilton HMIL, BM) <input type="checkbox"/> 3DV Systems Ltd. (Yorkham, IL) <input type="checkbox"/> 3G Corporation (West Lafayette, IN) <input type="checkbox"/> 3L & T, Inc. (Mountain View, CA) <input type="checkbox"/> 3M Company (St. Paul, MN) <input checked="" type="checkbox"/> 3M Innovative Properties Co. (St. Paul, MN) <input checked="" type="checkbox"/> 3M Innovative Properties Co. (St. Paul, MN) <input checked="" type="checkbox"/> 3M Innovative Properties Co. (St. Paul, MN) <input checked="" type="checkbox"/> 3M Innovative Properties Co. (St. Paul, MN) <input checked="" type="checkbox"/> 3M Innovative Properties Company (Saint Paul, MN) <input checked="" type="checkbox"/> 3M Innovative Properties Company (St. Paul, MN) <input checked="" type="checkbox"/> 3M Innovative Properties Company (St. Paul, MN) <input checked="" type="checkbox"/> 3M Innovative Properties Company (St. Paul, MN) <input checked="" type="checkbox"/> 3M Innovative Properties Company (St. Paul, MN); Hydro-Quebec Corporation (Montreal, CA) <input type="checkbox"/> 3OG, Inc. (Austin, TX) <input type="checkbox"/> 3R Management AB (Vallgryd, SE) <input type="checkbox"/> 3T S.p.A. (Turin, IT) <input type="checkbox"/> 3U Partners (Casper, WY) <input type="checkbox"/> 3V Enterprises Inc. (CA)			
<b>Patent Number</b>				
<b>Patent Title</b>				
<b>Inventor Name</b>				
<b>Inventor Location</b>				
<b>Application Number</b>				
<b>Application Date</b>				
<b>Primary Examiner</b>				
<b>Assistant Examiner</b>				
<b>Attorney</b>				
<b>Parent Patent</b>				
<b>Date Issued</b>				
<b>US Classes</b>				
<b>International Classes</b>				
<b>US References</b>				
<b>Foreign References</b>				
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<b>Start</b>	<input type="checkbox"/> SQL Server Enterprise... <input type="checkbox"/> pto - Microsoft Vi... <input type="checkbox"/> SQL Server Query ... <input type="checkbox"/> Document1 - Micro... <input checked="" type="checkbox"/> MDI Form 1			



**Attorney Docket No.:** 5607

FIG. 31

[illegible]

**Contact Name:** Aldo Noto (703) 288-5250

FIG. 32

[illegible]

**Attorney Docket No.: 5607**

FIG. 33

[illegible]

**Attorney Docket No.: 5607**

FIG. 34

[illegible]

**Attorney Docket No.: 5607**

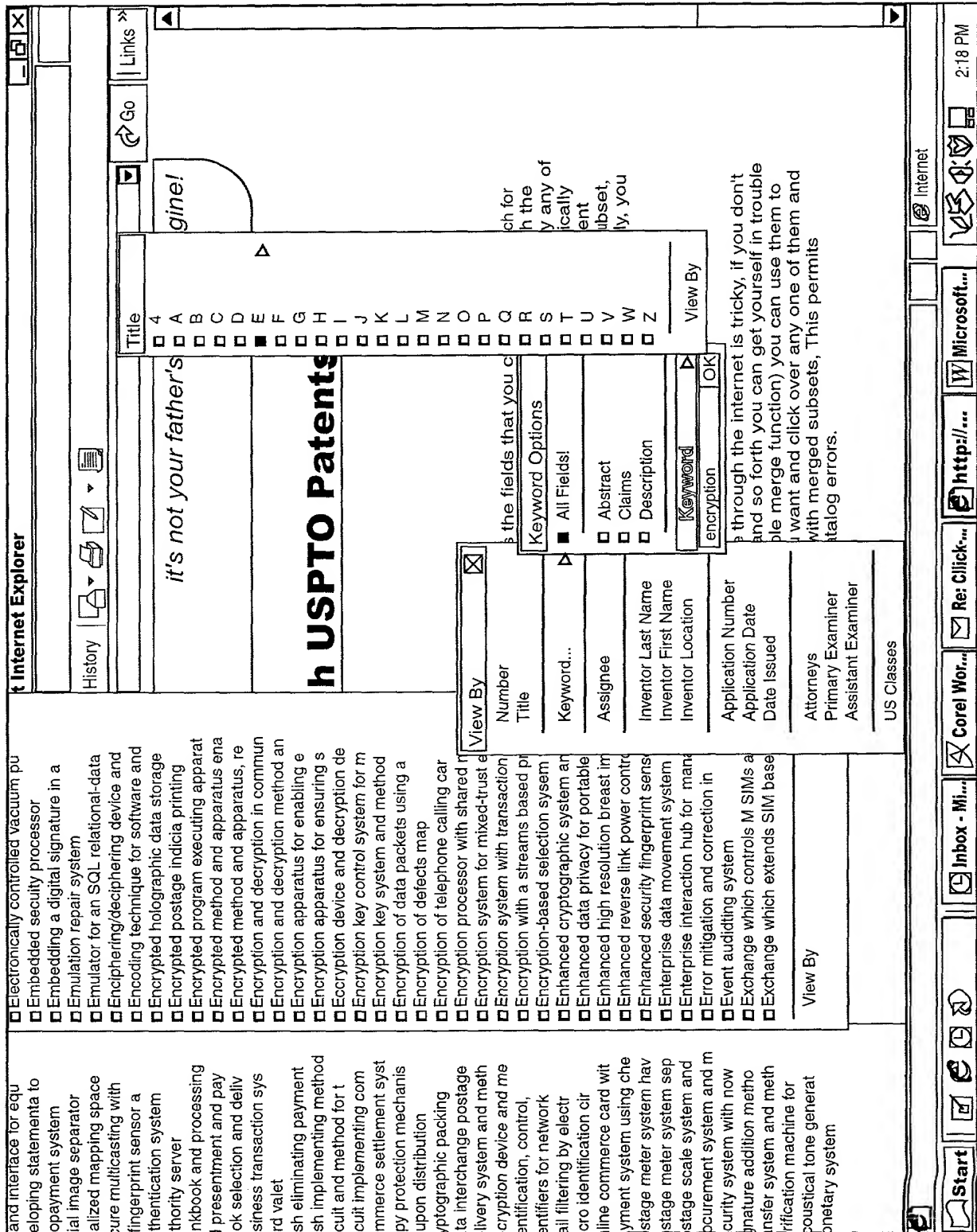
FIG. 35

[illegible]

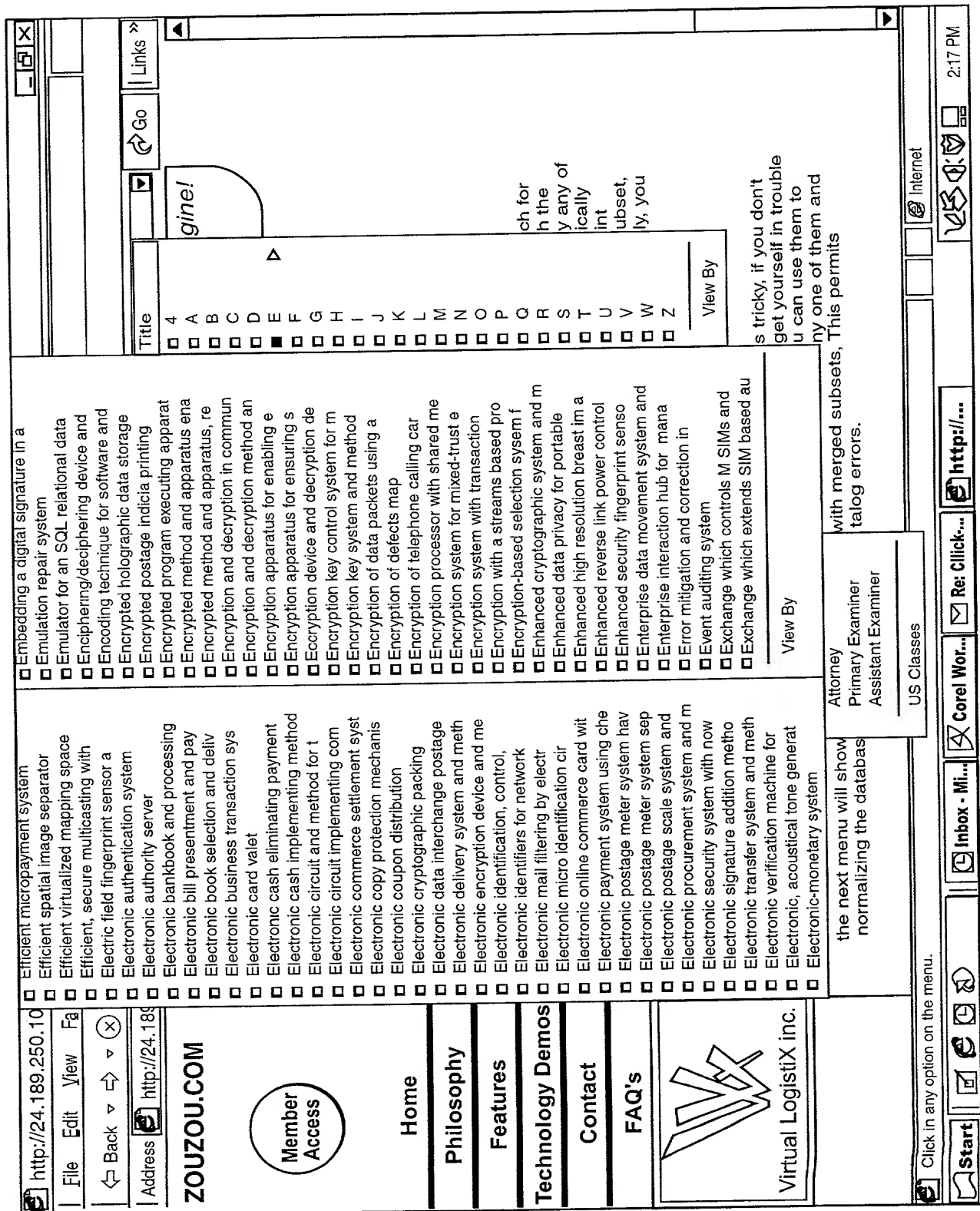
**Attorney Docket No.: 5607**

FIG. 36

[illegible]









**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION

**Inventor(s):** Joseph L. DeBellis

**Contact Name:** Aldo Noto (703) 288-5250

**Attorney Docket No.:** 5607

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**Patent: 5935246**

**Electronic copy protection mechanism using challenge and response to prevent unauthorized execution of software**

**Date Filled:**

4/11/1997

**Date Issued:**

8/10/1999

**Application Number:**

838620

**Go to USPTO.GOV**

**USPTO**

**Abstract:**

A copy protection mechanism for protecting software against copying, consists of a challenge mechanism embedded in each protected item of software. The challenge mechanism has no access to the customer's private keying material. In operation, the challenge mechanism sends a random challenge to the customer's signature server. The signature server signs the challenge, using the customer's private keying material and then returns the signed challenge to the challenge mechanism. The challenge mechanism then verifies the signed challenge, using the customer's public keying material, and prohibits the customer from using some or all of the protected item of software unless the verification is successful. The mechanism permits every customer to receive an identical copy of the copy protected program with the embedded challenge mechanism.

**Inventors:**

Benson, Glenn Stuart

**Inventor Location:**

Munich, DE

**Assignee:**

International Computers Limited (Limited, GB)

**US Classes:**

713/200

713/201

**International Classes:**

**US References:**

4558176

4926480

4947430

5109413

5146575

5224163

5315657

5371794

5436972

5568552

5724425

**Foreign References:**

**Primary Examiner:**

Kizou, Hassan

**Assistant Examiner:**

Mai, Rijue

**Attorney:**

Lee, Mann, Smith, McWilliams, Sweeney & Ohlson

**Claims:**

**FIG. 39**

0935246-03401  
"04280" 5935246

FIG. 40

FIG. 41

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**Attorney Docket No.: 5607**

FIG. 43

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

FIG. 43

MDIForm1		Attorney		Assignee	
S.O.F.		Attorney		Assignee	
D/A		D/A		Anca International Corporation (St Paul, MN)	
D.		D.		Austoft Industries Limited	
Dab		Dab		Bennett Automotive Tech	
Dac		Dac		Bennett Automotive Tech	
Dah		Dah		Bennett Automotive Tech	
Dai		Dai		Carlson; Chesley F. (Pl)	
Dal		Dal		Carter-Day Company (N	
Dan		Dan		Chesley F. Carlson Con	
Dar		Dar		Cleanair Engineering P	
Dau		Dau		Cleanair Engineering P	
Dav		Dav		Cleanair Engineering P	
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Dee		Dee		Cleanair Engineering P	
Deg		Deg		Cleanair Engineering P	
Deh		Deh		Cleanair Engineering P	
Dei		Dei		Cleanair Engineering P	
DeJ		DeJ		Cleanair Engineering P	
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Dem		Dem		Cleanair Engineering P	
Den		Den		Cleanair Engineering P	
DeP		DeP		Cleanair Engineering P	
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Det		Det		Cleanair Engineering P	
Deu		Deu		Cleanair Engineering P	
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Dhu		Dhu		Cleanair Engineering P	
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Dil		Dil		Cleanair Engineering P	
Dim		Dim		Cleanair Engineering P	
Dyb		Dyb		Cleanair Engineering P	
Dyk		Dyk		Cleanair Engineering P	
Dys		Dys		Cleanair Engineering P	
View By...		View By...		View By...	
Attorney		Attorney		Attorney	
/		/		Anca International Corporation (St Paul, MN)	
0		0		Austoft Industries Limited	
3		3		Bennett Automotive Tech	
A		A		Bennett Automotive Tech	
B		B		Bennett Automotive Tech	
C		C		Carlson; Chesley F. (Pl)	
D		D		Carter-Day Company (N	
E		E		Chesley F. Carlson Con	
F		F		Cleanair Engineering P	
G		G		Cleanair Engineering P	
H		H		Cleanair Engineering P	
I		I		Cleanair Engineering P	
J		J		Cleanair Engineering P	
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Patent Number		Patent Number		Patent Number	
Inventor Name		Inventor Name		Inventor Name	
Inventor's Location		Inventor's Location		Inventor's Location	
US References		US References		US References	
Foreign References		Foreign References		Foreign References	
US Classes		US Classes		US Classes	
International Classes		International Classes		International Classes	
Application Number		Application Number		Application Number	
Application Date		Application Date		Application Date	
Issue Date		Issue Date		Issue Date	
Primary Examiner		Primary Examiner		Primary Examiner	
Assistant Examiner		Assistant Examiner		Assistant Examiner	
Attorney		Attorney		Attorney	
Assignee		Assignee		Assignee	
View By...		View By...		View By...	
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Harrop 2.doc...		Harrop 2.doc...		Harrop 2.doc...	
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[illegible]

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

FIG. 45

MDIForm1	
S.O.F.	
<div><div>Primary Examiner</div><div>C. A Cahn Cain Caid Call Camb Camo Camp Cang Cann Cape Capo Capp Card Caro Carr Cart Casa Case Cash Caso Cast Caun Cape Cham Chan Chap Char Chat Chau Chea Chen Cher Chi, Chie Chil Chin Chot Chri Chur Clar Cint Clat Claw Clay</div></div>	<div><div>Primary Examiner</div><div>Clin Coan Cobi Cock Codi Coe, Cois Coha Cohe Cohn Cole Comb Cong Cook Coop Corb Corc Core Cora Cosi Cosb Coug Cous Cove Cox Crai Cram Cran Cras Cros Crow Croy Cuch Cucl Cuda Culb Culy Cuom Curt Cusb Cusi Cust Czaj Czal Czas View By...</div></div>
<div><div>Primary Examiner</div><div>0 1 2 3 5 6 7 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z View By...</div></div>	<div><div>Primary Examiner</div><div>Casa Case Cash Caso Cast Caun Cape Cham Chan Chap Char Chat Chau Chea Chen Cher Chi, Chie Chil Chin Chot Chri Chur Clar Cint Clat Claw Clay View By...</div></div>
<div><div>ViewBY</div><div>Title Patent Number  Inventor Name Inventor's Location US References Foreign References US Classes International Classes Application Number Application Date Issue Date Primary Examiner Assistant Examiner Attorney Assignee</div></div>	

MDIForm1

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ptoX - Microso...

MDIForm1

10:41 AM

**Attorney Docket No.: 5607**

MDI Form 1		S.O.F.	
<b>Primary Examiner</b> Dahl, Lawren Dan, Hoang C Dang, Hoang Dang, Thi Danison, Wal Daus, Donald Daus, Donld Daus, Douglia Dauss, Donal David Smith, Davis, James Davis Jr., A Davis, Alber Davis, C. Davis, Curti Davis, Jennia Davis, Jr. A Davis, Caro Davis, C. Dority, Carr Dority, Jr. Dority, Jr., Dority, Jr., Dorner Kenne Dorner, Kenn De Boer, Tod Dean, Jr, R Dean, R Dean, R. Dean, Richar Dean, W. Dear, R DeBoer, Todd Dechisle, Ant Deck, Randal Draper, Garr Dees, Carl F Dees, Jose Dees, Jose G Dees, Jose/ Dees, Josee Dees, JoseG. Dehrsnd, Har Demeo, Palme Demers, Arth DeMille, Dan Denlon, Thom Dertz, Berna Derrington, Desmond, Eug Di Palma, Vi Diehl, Dwigh Dier, Philip	<b>Primary Examiner</b> Didline, Jr. DIPalma, Vic Dixon Jr., W Dixon, Harold Dixon, Josep Dixon, Willi Dixon, Harold Dixon, Jr., Dixon, Jr., Dobeck, B. Dobeck, Benj Dobeck, G. Dobeck, H. Dolinar, And Doll, John Donovan, Lin Dority Carro Dority, Caro Dority, Carr Dority, Jr. Dority, Jr., Dority, Jr., Dorner Kenne Dorner, Kenn Dost, Gerald Dote, Janis Dote, Janis Doudreau, Le Douglas Wins Douglas, Win Downey, K. Downey, Kenn Downey, Mary Draper, Garr Drezen, Norm Drezin, Norm Drodge, Jose Drummond Dou Drummond, Do Dugan, Donov Dugan, James Dugga, Donov Duggan, Dono Duzan, James Dwyer, James Dziehtzynski, Dziehtzynski, View By...	<b>Primary Examiner</b> Dees, Jose Dees, Jose G. Dees, Jose/ Dees, Josee G. Dees, JoseG. View By...	<b>Primary Examiner</b> Dees, Jose Dees, Jose G. Dees, Jose/ Dees, Josee G. Dees, JoseG. View By...



**Attorney Docket No.: 5607**

FIG. 47

Assignee		View By...	
"			
(			
1	Uliano Corporation (Brooklyn, NY)		
2	Ulidicks: Charles D. (Newbury Park, CA)		
3	Uliapara Holdings Pty. Ltd. (New South Wales, AU)		
4	Ulinic France (Paris, FR)		
5	Ulrich Baensch (Melle, DT)		
6	Ulrich Luboschik (DE)		
7	Ullstein Propeller A/S (NO)		
8	Ultimage Inc. (Quebec, CA)		
A	Ultimate Window Coverings, Inc. (Lakewood, CO)		
B	Ultra Light Arms, Inc. (Granville, WV)		
C	Ultra Mortar, Inc. (Ogden, UT)		
D	Ultra Plating Corporation (Green Bay, WI)		
E	Ultra-Centrifuge Nederland N.V. (Almelo, NL)		
F	Ultra-Mold Corporation (Willow Grove, PA)		
G	Ultra-Precision Manufacturing, Ltd. (Birmingham, MI)		
H	Ultra-Violet Products, Inc. (San Gabriel, CA)		
I	Ultracentrifuge Nederland N.V. (The Hague, NL)		
J	Ultracendent Products, Inc. (Salt Lake City, UT)		
K	Ultradent Products, Inc. (South Jordan, UT)		
L	Ultrafibre, Inc. (Granville, OH)		
M	Ultrakist Electronic GmbH (Ruhmannsfelden, DE)		
N	Ultralife Batteries, Inc. (Newark, NY)		
O	Ultrasonic Endroidery Machine Company (North Haven, CT)		
P	Ultrasonic Equipment Company (Addison, IL)		
Q	Ultramatrix, Inc. (Los Angeles, CA)		
R	Ultramed Corporation ()		
S	UL TRAMET (Pacoima, CA)		
T	Ultrasonic Arrays, Inc. (Woodinville, WA)		
U	Ultrasonic Energy Corporation (Riverdale, NY)		
V	Ultrasonic Systems, Inc. (Farmingdale, NY)		
W	Ultratec, Inc. (Madison, WI)		
X	Ultratek International, Inc. (Concord, CA)		
Y	UltraThermics (Redmond, WA)		
Z	Ultraviolet Purification Systems (Bedford Hills, NY)		
	Ultraviolet Purification Systems, Inc. (Irvine, CA)		
	Ultraystems Defense and Space, Inc. (Irvine, CA)		
	Ultronic Systems Corporation (Moorestown, NJ)		
	Ultrrox International (Santa Ana, CA)		
	Uly-Pak, Inc. (Carbondale, IL)		
	Uly-Pak, Inc. (Ulysses, KS)		
	Ulysses Corporation (St. George, UT)		

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Title		Title	
Patent Number		Patent Number	
Inventor Name		Inventor Name	
Inventor's Location		Inventor's Location	
US References		US References	
Foreign References		Foreign References	
US Classes		US Classes	
International Classes		International Classes	
Application Number		Application Number	
Application Date		Application Date	
Issue Date		Issue Date	
Primary Examiner		Primary Examiner	
Assistant Examiner		Assistant Examiner	
Attorney		Attorney	
Assignee		Assignee	

Assignee		View By...	
Uliano Corporation (Brooklyn, NY)			
Ulidicks: Charles D. (Newbury Park, CA)			
Uliapara Holdings Pty. Ltd. (New South Wales, AU)			
Ulinic France (Paris, FR)			
Ulrich Baensch (Melle, DT)			
Ulrich Luboschik (DE)			
Ullstein Propeller A/S (NO)			
Ultimage Inc. (Quebec, CA)			
Ultimate Window Coverings, Inc. (Lakewood, CO)			
Ultra Light Arms, Inc. (Granville, WV)			
Ultra Mortar, Inc. (Ogden, UT)			
Ultra Plating Corporation (Green Bay, WI)			
Ultra-Centrifuge Nederland N.V. (Almelo, NL)			
Ultra-Mold Corporation (Willow Grove, PA)			
Ultra-Precision Manufacturing, Ltd. (Birmingham, MI)			
Ultra-Violet Products, Inc. (San Gabriel, CA)			
Ultracentrifuge Nederland N.V. (The Hague, NL)			
Ultracendent Products, Inc. (Salt Lake City, UT)			
Ultradent Products, Inc. (South Jordan, UT)			
Ultrafibre, Inc. (Granville, OH)			

Attorney Docket No.: 5607

FIG. 48

[illegible]

FIG. 49

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S.O.F.

(4008054) Process for making low-sulfur and low-ash fuels

Title: Process for making low-sulfur and low-ash fuels

Assignee: Consolidation Coal Company (Pittsburgh, PA)

Attorney: Mikesell, Jr., William A., Fowler, Jr., D. Leigh, Price, Jr., Stanle

Examiner: Dees, Carl F.

Assistant Examiner:

Patent Number: 4008054

Application Number: 540310

Application Date: 1/10/1975

Issue Date: 2/15/1977

URL: http://164.195.100.11/netacg/nph-Parse...

8054\WKU.%25260S=PN\4008054%2526RS=PN\4008054

Inventor's: Clancey, James I.  
Goin, Everett  
Reich, Eric H.  
Rice, Charles H.

Inventors Location: Pittsburgh, PA  
Pittsburgh, PA  
Pittsburgh, PA  
Pittsburgh, PA

Web... Exit

Parent Case

Description

1. Field of the invention This invention relates to a process for converting coal to low-sulfur and low-ash gaseous, liquid and solid fuels, and more particularly, to a process for supplying the energy requirements of a steel plant from an ash- and sulfur-containing coal. Description of the Prior Art The primary source of energy for the steel industry continues to be coke for the blast furnace. The conventional method for coke manufacture, that is, by slot ovens, requires a blend of high and low volatile coals of proper swelling properties to produce a strong coke without damaging the ovens. Beyond these physical properties, there is a need for desirable chemical properties (i.e. low ash and sulfur content) to permit low-cost production of high quality hot metal. With the continued expansion of the world's productive capacity for steel, a growing shortage of good metallurgical coals is developing, particularly those having the essential low volatile coal ingredients. Low-sulfur coals also are

Classes

References

INDURATION ZONE 26

FORMING ZONE 25

MIXING ZONE 23

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FRACTIONAL DISTILLATION ZONE 20

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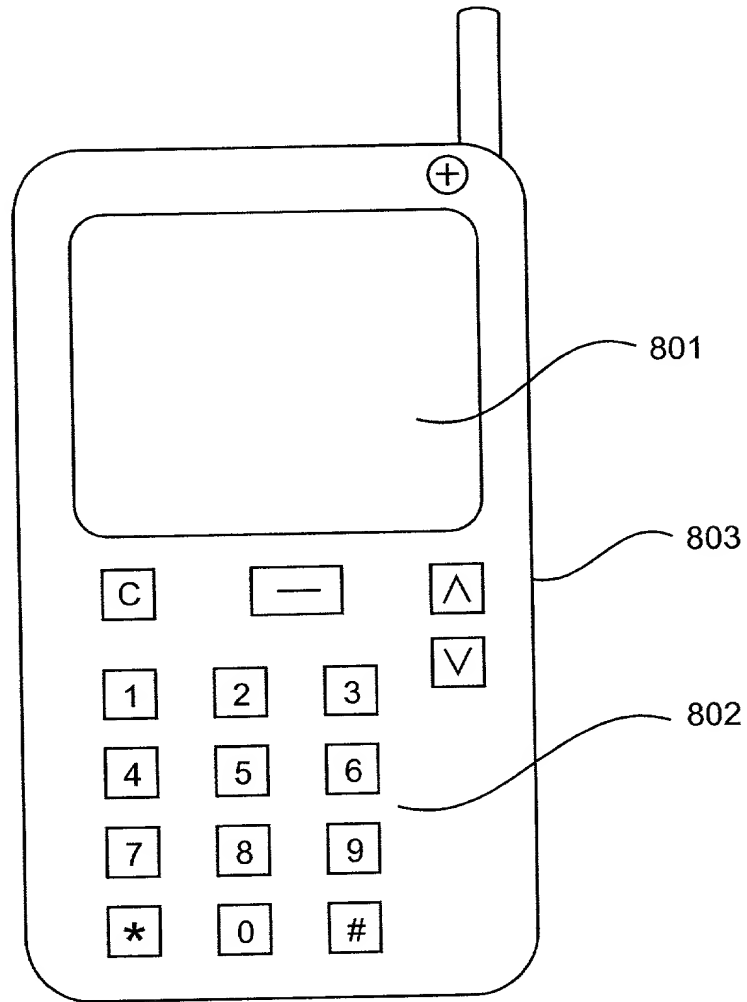
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**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION

**Inventor(s):** Joseph L. DeBellis

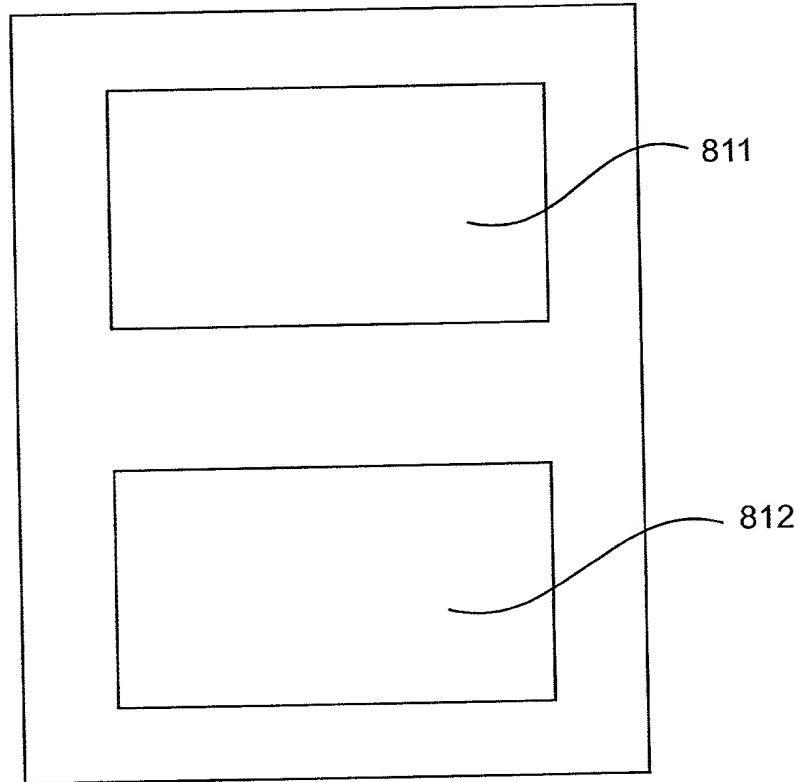
**Contact Name:** Aldo Noto (703) 288-5250

**Attorney Docket No.:** 5607



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**FIG. 50**



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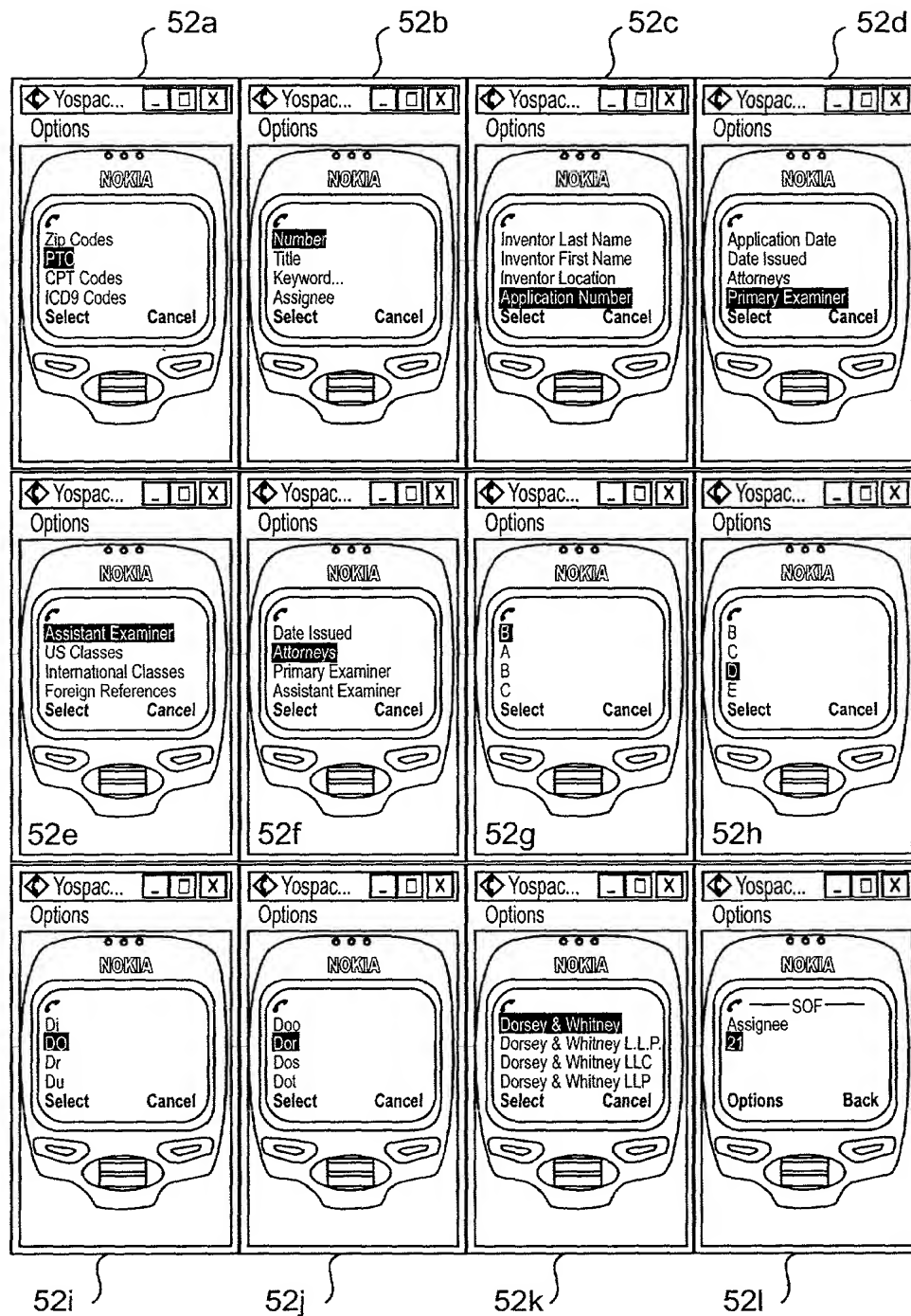
**FIG. 51**

**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION

**Inventor(s):** Joseph L. DeBellis

**Contact Name:** Aldo Noto (703) 288-5250

**Attorney Docket No.:** 5607



**FIG. 52**

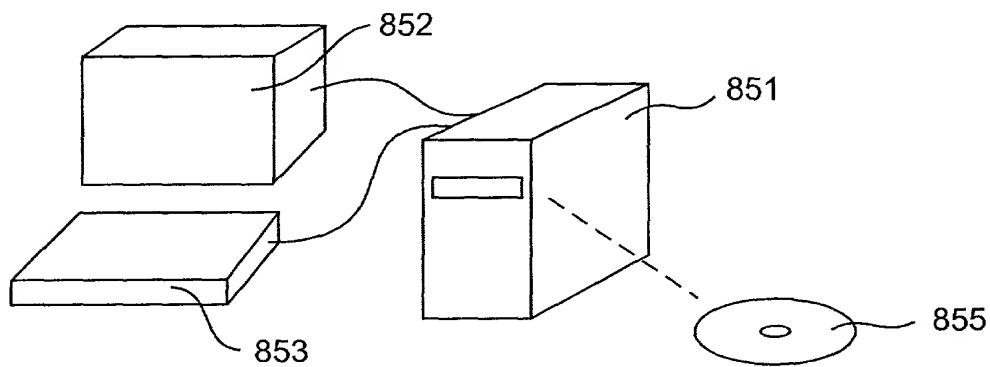
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**Title:** SEARCH-ON-THE-FLY WITH MERGE FUNCTION

**Inventor(s):** Joseph L. DeBellis

**Contact Name:** Aldo Noto (703) 288-5250

**Attorney Docket No.:** 5607



850

**FIG. 53**